

ATTACHMENT 7: LE COMMENTS

Hood Canal Coordinating Council

JEFFERSON, KITSAP & MASON COUNTIES
PORT GAMBLE S'KLALLAM & SKOKOMISH TRIBES
STATE & FEDERAL AGENCIES

December 14, 2005

Salmon Recovery Funding Board Review Panel
P.O. Box 40917
Olympia, WA 98504-0917

RE: Round 6 – Review Panel Ratings and Narratives

Dear Review Panel:

Thank you for the opportunity to comment on the Draft Review Panel (RP) Ratings and Narratives. Though there are several areas that additional interaction and discussion would benefit both RP and Lead Entity (LE) products, we would like to take this immediate opportunity to address what we feel is an inaccurate ranking for our Fit-to-Strategy Rank Order category.

As is demonstrated by our “excellent” rating for Fit-to-Strategy Actions and Geographic Areas category, we’ve worked hard to continue to refine the specificity of our priorities in the Hood Canal Coordinating Council’s Strategy. We also show that we continue to improve the alignment of the projects in our habitat project list to those priorities each year as we are submitting fewer and fewer projects that are now completely focused on directly benefiting at least 1 ESA species.

Given the continued refinement of our priorities, and the submittal of our habitat project list with Tier 1, Priority 1 actions only (at much pain locally and much improvement over previous years), it is difficult to understand why we received an “excellent/good” rating in the Fit to Strategy’s Rank Order category, rather than “excellent.” The criterion for an excellent rating states that “the entire list of projects fits the specific and focused priorities presented in the strategy or recovery plan.” By definition, we have met this with our submittal package.

The RP narrative states that “the list includes projects that appear appropriate given the level of prioritization described, and that further strategic prioritization of actions and underlying rationale would be very helpful.” The LE agrees with both statements, and is continuing to address “further strategic prioritization” with our action ranking process through EDT modeling for Salmon Recovery Plans (SRP) as discussed in our 1 hour meeting. Regardless, we feel we have met the criterion for an “excellent” rating in the Rank Order category and it is inappropriate for the Review Panel to develop additional criteria that aren’t reflected anywhere in process documentation.

Looking at our rating in relation to the other LEs that were assigned an “excellent” rating in this category is also extremely informative. The majority of those ratings were given

to lead entities with far fewer projects proposed than we have, making it easier to satisfy the rank order criteria. This phenomenon can be scaled up to an observation that smaller, simpler LEs with fewer projects often receive higher ratings. Shouldn't relative difficulty of meeting this parameter's criterion also be considered somewhere, or conveyed in some terms? Also, by our review of other LEs and the projects they submitted, it seems that the "additional criterion" of looking at rankings within priorities imposed on us was not imposed on other LEs. What is the reasoning for the application of different criteria for different LEs?

It seems to us that this burgeoning process (that is beginning to forget that local TAGs and CAGS determine the appropriate rank order), though nested within good intentions, is somehow forgetting about finding the best projects to help fish.

Any feedback would be appreciated, and would provide for a stronger Strategy and SRP in future years.

Thanks for all your effort this year,

Richard Brocksmith
Lead Entity Coordinator



Skagit River System Cooperative

11426 Moorage Way • P.O. Box 368 LaConner, WA 98257-0368

Phone: 360-466-7228 • Fax: 360-466-4047 • www.skagitcoop.org

November 30, 2005

Kim Bredensteiner
Salmon Recovery Lead Entity Coordinator
Island County Public Works
PO Box 5000
Coupeville, WA 98239

Dear Ms. Bredensteiner,

This letter is in response to comments provided by the State SRFB review panel yesterday, November 29, 2005 regarding the Skagit Basin Nearshore Restoration and Protection Feasibility Assessment grant application. The panel has requested that we eliminate the following objectives from the project evaluation proposal:

- Objective 4: Determine pathways by which juvenile salmon access pocket estuaries in Skagit Bay,
- Objective 5: Sample fish use of nearshore habitats to validate the migration pathways model, and
- Objective 9: Evaluate the impacts of sea level rise on restoration potential at the ten pocket estuaries.

We agree to remove these items from the proposal and will provide an updated budget and scope to reflect these changes. It is our understanding that this will remove the "project of concern" status for this proposal. Please let me know if there are any questions regarding this matter.

Sincerely,

Steve Hinton
Program Director
Skagit River System Cooperative

Application Authorization Memorandum

Each organization submitting a project must complete this form.

TO: Salmon Recovery Funding Board (SRFB)
PO Box 40917
Olympia, Washington 98504-0917

THROUGH: **Island County**
(lead entity name)

FROM: **Skagit River System Cooperative**
(applicant name)

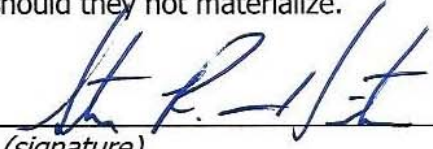
Through the lead entity identified above, the SRFB is hereby requested to consider this application for financial assistance for the Salmon Recovery project(s) described below and to grant funding from such State and Federal sources as may be available. This application is prepared with knowledge of and in compliance with SRFB's policies and procedures. Further, we agree to cooperate with the SRFB by furnishing such additional information as may be necessary to execute a SRFB Project Agreement and to adhere to all appropriate state and federal statutes governing grant monies under the Project Agreement. We are aware that the grant, if approved, is paid on a reimbursement basis. We agree that all application materials, including photos, slides, site drawings, maps, etc., become the property of IAC/SRFB and may be used by IAC/SRFB for education, information, or other non-commercial purposes in publications, presentations or on the IAC/SRFB web site.

Project Name(s): **Skagit Basin Nearshore Restoration and Protection Feasibility Assessment**

(Attach list
if necessary)

I/we certify that to the best of our knowledge, the data in this application is true and correct. In addition, I/we certify that the matching resources identified in the grant are committed to the above project. I/we acknowledge responsibility for supporting all non-cash commitments and donations should they not materialize.

Authorized Representative:


(signature)

8/16/05
(date)

Printed Name and Title: _____

1. General Application Information

(ENTER ON PRISM TAB 1)

Project Name

Project Type (check one)

- ☒ **Non-Capital** (assessments and studies)
☐ **Planning and Acquisition** (assessment and acquisition)

2. Applicant / Organization Information

(ENTER ON PRISM TAB 1 – SEARCH FOR ORGANIZATION)

Organization Name

Organization Type (check one)

- | | | |
|--|--|--|
| <input type="checkbox"/> City/Town | <input type="checkbox"/> County | <input type="checkbox"/> Private Landowner |
| <input type="checkbox"/> Conservation District | <input checked="" type="checkbox"/> Native American Tribe | <input type="checkbox"/> Non-profit Organization |
| <input type="checkbox"/> RFEG | <input type="checkbox"/> Special Purpose District | <input type="checkbox"/> State Agency |

Organization Address

Address **PO Box 368 11426 Moorage Way**

City/Town **LaConner**

State, Zip **WA 98257**

Telephone # **360-466-7243**

FAX # **360-466-4047**

Internet e-mail address

Web site URL **www.skagitcoop.org**

3. Project Contact Information

Complete one for each contact.

(ENTER ON PRISM TAB 1 – SEARCH FOR PERSON)

☐ Mr. ☒ Ms. Title **Restoration Ecologist**

First Name **Darla**

Last Name **Boyer**

☒ Primary Contact OR ☐ Alternate Contact

Contact Mailing Address

PO Box 368 11426 Moorage Way

Work Telephone # **360-466-7225**

City/Town **LaConner**

FAX # **360-466-4047**

State, Zip **WA 98257**

Internet e-mail address **dboyer@skagitcoop.org**

4. Goal and Objective Non-Capital Projects (ENTER ON PRISM TAB 2)

| | |
|--|---|
| Goal: The goal of the project is to increase and/or maintain adequate flows for wild salmon. (No measurements for this goal). Objective: The objective of the project is to reduce over appropriation of water in salmon bearing streams. | <input type="checkbox"/> |
| Goal: The goal of the project is to increase and improve information to help select projects that have a high certainty and benefit. Objective: The objective of the project is to determine feasibility of acquiring land and landowner willingness to sell. Objective: The objective of the project is to determine feasibility of creating or reconnecting off-channel habitat. Objective: The objective of the project is to determine project siting, feasibility, design, or implementation. Objective: The objective of the project is to fill data gaps identified in the lead entity strategy. Objective: The objective of the project is to fill data gaps regarding fish barriers. Objective: The objective of the project is to fill data gaps regarding limiting factors and scientific studies. Objective: The objective of the project is to fill data gaps regarding marine nearshore assessments. Objective: The objective of the project is to identify locations where derelict gear are a source of salmon mortality. | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

5. Measurement Information RESPOND TO THE FOLLOWING MEASUREMENTS (ENTER ON PRISM TAB 6)

| | |
|---|---|
| Measurement: Plan/assessment has been used to guide restoration actions | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Measurement: Plan/assessment identifies necessary actions needed to meet goals. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Measurement: Plan/assessment identifies/prioritizes factors limiting production. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Measurement: Plan/assessment incorporates biological goals. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Measurement: Length of streambank protected through land acquisition/easement/lease. (If both sides, add lengths). | _____ Miles |

6. Short Description of Project

Describe project, what will be done, and what the anticipated benefits will be in 1500 characters or less.

(ENTER ON PRISM TAB 2)

The purpose of the project is to assess restoration/protection potential, feasibility, and priority at 10 nearshore pocket estuaries within 1 ebb cycle of two natal river deltas in the Skagit Basin (Geographic Priority Area 1) and complete 30% design at one of these sites with a high likelihood of success and long term sustainability. The project will benefit five salmon species including Chinook that use the nearshore areas

The project has three goals. 1) identify interested landowners and obtain landowner willingness/agreements for as many of the 10 target sites as possible, 2) conduct an evaluation of restoration and protection potential and feasibility and provide a comprehensive technical report of the analysis prioritizing sites for restoration/protection, and 3) complete a 30% design for the highest priority site with landowner willingness. SRSC will partner with Island Co. Marine Resource Committee for assessing/obtaining landowner willingness.

The project will address restoration/protection of critical rearing habitats for salmon and forage fish (Goals 1&2, Objectives 1-3, Island County Multi-Species Salmon Recovery Plan, 2005), will clarify protection priorities for existing high-quality nearshore habitats, and will engage vested landowners in conversation about their shoreline properties (Goal 3, Objectives 1-3, MSSRP, 2005).

7. Summary of Funding Request and Match Contribution

Remember to update this section whenever changes
are made to your cost estimates.

(ENTER ON PRISM TAB 3)

TOTAL PROJECT COST (A + B)
(Sponsor Match & SRFB Contribution)

\$172,147

A. Sponsor Match Contribution (15% minimum is required for match)

| | |
|---------------------------|------------------|
| Appropriation/Cash | \$ _____ |
| Bonds - Council | \$ _____ |
| Bonds - Voter | \$ _____ |
| Cash Donations | \$ _____ |
| Conservation Futures | \$ _____ |
| Donations | |
| Donated Equipment | \$ _____ |
| Donated Labor | \$ _____ |
| Donated Land | \$ _____ |
| Donated Materials | \$ _____ |
| Donated Property Interest | \$ _____ |
| Force Account | |
| Force Acct - Equipment | \$ _____ |
| Force Acct - Labor | \$ _____ |
| Force Acct - Material | \$ _____ |
| Grants* | |
| Grant - Federal | \$ <u>25,823</u> |
| Grant - Local | \$ _____ |
| Grant - Private | \$ _____ |
| Grant - State | \$ _____ |

Total Sponsor Match Contribution

\$25,823

15% Minimum Match Required
of A. TOTAL PROJECT COST

B. SRFB Contribution (grant request)

\$146,324

\$5,000 Minimum Request

***Note, be sure to identify the name and type of any matching grant in the
Application Questionnaire Section.**

**Note: The Total Project Cost must equal the totals
from the following Cost Estimate Section.**

Assessment and Studies Project Cost Estimate (Continued)

9. Assessment and Studies Project Cost Estimate (ENTER ON PRISM TAB 5)

ASSESSMENTS AND STUDIES may include feasibility studies; channel migration studies; reach-level, near-shore, and estuarine assessments; and inventories such as barrier, unscreened water diversions; and landslide hazard. A feasibility study could include assessing the willingness of landowners to agree to allow access to their land for a habitat project or to consider selling a conservation easement. The results of proposed assessments must directly lead to identification, siting, or design of habitat protection or restoration projects or fill a data gap identified as a priority in a lead entity strategy.

Complete only items that apply to your project.
TOTAL COST must include the SRFB and Sponsor's Match Contribution.
Use only whole dollar amounts.

| Item | Unit | Qty. | Total Cost | Description Needed | Description (60 characters max.) |
|-------------------------------|----------|------|------------|--------------------|---|
| Communications | | | | | |
| Advertising | Lump sum | | \$250 | Optional | |
| Communications – other | Lump sum | | | Optional | |
| Postage | Lump sum | | \$100.00 | Optional | |
| Printing, binding, copying | Lump sum | | \$700.00 | Optional | |
| Telephone | Lump sum | | \$350.00 | Optional | |
| Equipment | | | | | |
| Equipment – other | Lump sum | | \$5,000 | Describe | Pressure Transducers |
| Insurance | | | | | |
| Insurance – other | Lump sum | | | Describe | |
| Liability insurance | Lump sum | | | To/From | |
| Permits | | | | | |
| Permits | Lump sum | | | Optional | |
| Professional Services | | | | | |
| Consultant(s) | Lump sum | | \$20,000 | Optional | Geomorphology data collection, 30% design |
| Mapping/GIS | Lump sum | | | Optional | |
| Photography | Lump sum | | | Optional | |
| Professional services – other | Lump sum | | \$20,000 | Optional | MRC Landowner Outreach |
| Surveying | Lump sum | | | Optional | |
| Rentals & Leases | | | | | |
| Meeting rooms | Lump sum | | | Optional | |
| Rentals & leases – other | Lump sum | | | Describe | |
| Vehicle lease | Lump sum | | | Optional | |

| Item | Unit | Qty. | Total Cost | Description Needed | Description (60 characters max.) |
|--------------------------------|--------------|-------|------------------|------------------------------|---|
| Salaries & Benefits | | | | | |
| Salaries & benefits | # of FTE's | 0.02 | \$2,069 | Program Director | landowner communication, report review, administration |
| Salaries & benefits | # of FTE's | 0.17 | \$17,629 | Research Director | data analysis, report writing, presentations |
| Salaries & benefits | # of FTE's | 0.17 | \$12,064 | Senior Restoration Ecologist | data analysis, report writing, presentations, budget mgmt. |
| Salaries & benefits | # of FTE's | 1.0 | \$64,217 | Ecologist | proj. coord., field work, data collection, analysis, reporting, presentations |
| Salaries & benefits | # of FTE's | 0.15 | \$5,598 | Natural Resources Technician | field work, equipment maintenance |
| Salaries & benefits | # of FTE's | 0.30 | \$13,296 | GIS Technician | data entry, mapping, assisting with report writing |
| Salaries & benefits | # of FTE's | 0.12 | \$5,796 | Accountant | billing, accounting, reporting |
| Supplies | | | | | |
| Computer software | Lump sum | | | Describe | |
| Forms, maps, stationery | Lump sum | | \$230 | Optional | printer and plotter paper and ink for maps |
| General supplies | Lump sum | | \$743 | Optional | misc. field and office supplies |
| Publications | Lump sum | | \$250 | Optional | |
| Transportation/Travel | | | | | |
| Mileage | Rate | 0.48 | \$600 | Miles | 1250 miles |
| Per diem | Each | | | Optional | |
| Transportation/travel – other | Lump sum | | 2,100 | Describe | boat operation, fuel, and maintenance |
| Vehicle use | Rate / month | \$350 | \$1,155 | Optional | |
| Sales Tax | | | | | |
| TOTAL COSTS | | | \$172,147 | | |

10a. Application Questionnaire

All applicants must answer the following questions.

(ENTER ON PRISM TAB 8)

Cost Efficiencies

For any grants listed in the Summary of Funding Request and Match Contribution Section, are there any restrictions on the use of these grant funds? When and how long will the grant funds be available to this project?

The grant monies provided by MRC have no known limitations and are available through July 2007.

Describe the type of donated labor (skilled and unskilled), donated equipment, and donated materials that will be used for this project, identified in the Summary of Funding Request and Match Contribution Section.

The Island County Marine Resources Committee will share recent nearshore studies and data with SRSC as part of the feasibility assessment. In addition, the MRC will conduct nearshore landowner outreach to the target areas through the Shoreline Stewards program. Volunteer Stewards will help build and identify landowner interest and involvement and disseminate educational materials regarding restoration and preservation of healthy nearshore ecosystems to the shoreline property owners. This outreach strategy is unique in that it will utilize shoreline property owners to engage other shoreline property owners. Property owner outreach is critical to the future of nearshore habitat restoration and protection in Island County. Much of the shoreline is privately owned in priority Geographic Area 1. Landowner interest and participation is needed for the success of protection and restoration of key nearshore habitat

Land Ownership

What type of landowner currently owns the property? (Federal, Local, Private, State or Tribal.)

The feasibility assessment will cover 10 pocket estuaries in the Skagit Bay area of Geographic Area 1. Property ownerships include both public and private holdings.

What is the current land use of the site, and its history? Describe past human uses and salmon habitat functions.

Current land use varies by site but is primarily residential. Outmigrating juvenile Chinook salmon accumulate in pocket estuaries (PEs) during late winter and spring. They are 100 and 10 times more abundant in pocket estuary habitat than in offshore or other nearshore habitat (Beamer et. al. 2003). SRSC proposes that the complexity and distance of the pathway salmon must follow to reach the PE's are important as well as freshwater inflow, size, shape, amount of vegetation present, and anthropogenic factors. Historically all of the PE's to be assessed were accessible to forage fish and outmigrating salmon and the geomorphic processes which support these habitats were unrestricted. In the 1940's many of these sites were undeveloped, used for low impact agriculture (pasture), or log storage and transport sites. As a result, these 10 sites provided significantly larger area of preferred habitat for juvenile salmon and forage fish.

Worksite Location Data

What are the geographic coordinates of the work site(s) (in degrees, minutes and seconds)? [If you do not have them, you may leave this question blank.]

What is the township/range/section of the work site(s)?

The Skagit Bay area of study (east Whidbey and north Camano Island) generally falls within Township 34N, Ranges 1 and 2 East, Township 33N, Ranges 1 and 2 East, and Township 32N, Ranges 1 and 2 East

In what county(s) is the work site(s) located? In what city, if applicable?

Island County

In what Water Resource Inventory Area(s) (WRIA) is the work site located? (Provide WRIA name and WRIA number.)

WRIA 6

Is the work site on a stream and/or other waterbody? If yes, name the stream and/or waterbody. If the stream is a tributary of a larger stream, also name the larger stream. If you know the river mile, list it here.

Skagit Bay nearshore

Is your work site(s) located within estuarine or saltwater habitat? If so, name it. How close is it to fresh water systems? Name any other estuary or habitat adjacent to this site.

The study area will include 10 nearshore areas of Skagit Bay that fall within Island County priority Geographic Area 1.

Is the work site(s) located within a park, wildlife refuge, natural area preserve, or other recreation or habitat site? If yes, name the area.

One of the sites, English Boom, is a County Park property with adjacent State Fish and Wildlife land. Coordination will occur with both the State and County to avoid duplication of efforts.

10b. Application Questionnaire

Combined Projects must answer the following questions.

Will the property proposed for acquisition involve future restoration? If yes, explain how and when restoration will occur.

10c. Application Questionnaire

Non-profit organizations must answer the following questions.

Is your organization registered as a non-profit with the Washington Secretary of State? If so, what is your Unified Business Identifier (UBI) number?

SRSC is a tribal organization.

What date was your organization created?

1975

How long has your organization been involved in salmon and habitat conservation?

30 years

11. Work Site Information

(ENTER ON PRISM TAB 9)

Driving Directions (provide directions that will enable staff to locate the project):

The 10 project sites are located along the shoreline of Skagit Bay on north Camano Island and east Whidbey Island (Figure 1).

Current Landowner(s) of the site (name and address). Remember to complete the Landowner Willingness Form.

There are multiple private landowners and County Park land. Access to properties will be limited and will be requested on a site by site basis as the need is identified.

12. Permits

Check the appropriate boxes to indicate required and/or anticipated permits.
General permit information can be obtained at the Dept. of Ecology Permit Assistance Center
1-800-917-0043 or on their Internet site
<http://www.ecy.wa.gov/programs/sea/pac/index.html>.

(ENTER ON PRISM TAB 10)

| Permits | Comments Regarding Permit Status |
|--|----------------------------------|
| <input type="checkbox"/> Aquatic Lands Use Authorization (Dept of Natural Resources) | NA |
| <input type="checkbox"/> Building Permit (City/County) | NA |
| <input type="checkbox"/> Clear & Grade Permit (City/County) | NA |
| <input type="checkbox"/> Cultural Assessment [Section 106] (CTED-OAHP) | NA |
| <input type="checkbox"/> Dredge/Fill Permit [Section 10/404 or 404] (US Army Corps of Engineers) | NA |
| <input type="checkbox"/> Endangered Species Act Compliance [ESA] (US Fish & Wildlife/NMFS) | |
| <input type="checkbox"/> Forest Practices Application [Forest & Fish] (Dept of Natural Resources) | NA |
| <input type="checkbox"/> Health Permit (Dept of Health/County) | NA |
| <input type="checkbox"/> Hydraulics Project Approval [HPA] (Dept of Fish & Wildlife) | NA |
| <input type="checkbox"/> NEPA (Federal Agencies) | NA |
| <input type="checkbox"/> SEPA (Local or State Agencies) | NA |
| <input type="checkbox"/> Shoreline Permit (City/County) | NA |
| <input type="checkbox"/> Water Quality Certification [Section 401] (County/Dept of Ecology) | NA |
| <input type="checkbox"/> Water Rights/Well Drilling Permit (Dept of Ecology) | NA |
| <input type="checkbox"/> Other Required Permits (identify) | NA |
| <input type="checkbox"/> None – No permits Required | |

13. Salmonid Species Information

Identify one or more targeted Salmonid species (directly on-site, indirectly downstream or within the rearing/migration corridor) whose habitat conditions you are attempting to improve or protect. Select one Primary Species.

(ENTER ON PRISM TAB 11)

| Salmonid Species | Species Targeted (select as many as apply) | Primary Species (select only one) |
|------------------|---|--------------------------------------|
| Bull Trout | × | <input type="checkbox"/> |
| Chinook | × | × |
| Chum | × | <input type="checkbox"/> |
| Coho | × | <input type="checkbox"/> |
| Cutthroat | × | <input type="checkbox"/> |
| Pink | × | <input type="checkbox"/> |
| Sockeye | × | <input type="checkbox"/> |
| Steelhead | × | <input type="checkbox"/> |

14a. Habitat Factors Addressed

| Habitat Factors | Project Addresses (select as many as apply) | Primary Factor (select only one) |
|---|--|-------------------------------------|
| 1. Biological Processes | × | <input type="checkbox"/> |
| 2. Channel Conditions (tidal channels) | × | <input type="checkbox"/> |
| 3. Estuarine and Near-shore Habitat | × | × |
| 4. Floodplain Conditions | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Lake Habitat | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Loss of Access to Spawning and Rearing Habitat | × | <input type="checkbox"/> |
| 7. Riparian Conditions | × | <input type="checkbox"/> |
| 8. Streambed Sediment Conditions | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Water Quality | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Water Quantity | × | <input type="checkbox"/> |

14b. Species/Habitat Factors Information Sources

| Study Name | Author | Date |
|--|--|------|
| Salmon habitat limiting factors report for WRIA 6 | Washington State Conservation Commission | 2000 |
| The importance of non-natal pocket estuaries in Skagit Bay to wild chinook salmon: An emerging priority for restoration. | Beamer, E., A. McBride, R. Henderson, and K. Wolf | 2003 |
| Pocket Estuary Research in the Whidbey Basin and north Skagit County Bays. | Beamer, E., A. McBride, R. Barch, K. Fresh, J. Griffith, R. Henderson, M. Rowse, and T. Zackey | 2004 |
| Feeder bluffs and accretion shoreform study | Jim Johannessen | 2004 |
| Documented spawning areas of the Pacific Herring (<i>Clupea</i>), surf smelt (<i>Hypomesus</i>), and Pacific sand lance (<i>Ammodytes</i>) in Island County, Washington. | Dan Penttila | 1999 |

| | | |
|---|---|----------------|
| Island County forage fish spawning beaches | Dan Penttila | 2003 -2004 |
| Island County shoreline hardening survey | Clyde Johnson | 2002 - 2004 |
| Island County estuarine restoration program | Sheldon & Associates | 2001 |
| Shorezone Data | Washington Department of Natural Resources | 2001 |
| Northwest Straits nearshore habitat evaluation | Anchor Environmental | 2002 |
| Island County eelgrass videography | Island County Marine Resource Committee consultants | 2002 - 2004 |
| The importance of Skagit delta habitat on the growth of wild ocean-type Chinook in Skagit Bay: implications for delta restoration. Skagit River System Cooperative research report. LaConner, Washington. | Beamer, E. M., and K. Larson | 2004 |
| Delta and Nearshore Restoration for the Recovery of Wild Skagit River Chinook Salmon: Linking Estuary Restoration to Wild Chinook Salmon Populations | Eric Beamer, Aundrea McBride, Correigh Greene, W. Gregory Hood, Karen Wolf, Rich Henderson and Casey Rice | 2005 |
| Geomorphic model for nearshore habitat assessment and change analysis | Aundrea McBride, Eric Beamer, Karen Wolf | In preparation |

15. Evaluation Proposal

I. BACKGROUND

The 2005 Island County Multi-Species Salmon Recovery Plan identifies the nearshore and pocket estuaries (PEs) of Whidbey Basin as the immediate priority for conservation and restoration due to their proximity to three large natal river systems (Skagit, Stillaguamish, and Snohomish). The plan also identifies a vision and four goals to achieve a community supported salmon conservation and restoration effort. Finally it encourages projects that incorporate landowner participation to increase landowner investment and understanding. This plan identifies the northeast shoreline of Whidbey Island and north Camano Island within the northern portion of priority Geographic Area 1 for salmon habitat restoration due to their close proximity to the Stillaguamish and Skagit River deltas.

Nearshore PEs within Island County Geographic Area 1 are important to fry migrant juvenile Chinook and other juvenile salmon (Beamer et al., 2003). Pocket estuaries are partially enclosed, measurably diluted marine waters that are smaller in scale than, and discontinuous from, Chinook natal river systems. They form behind coastal accretion landforms, at embayments created by submerged valleys, or at small creek deltas. These nearshore areas provide juvenile rearing habitat and migration corridors for endangered Skagit Chinook. Fry migrant juvenile Chinook salmon are ten times more abundant in Skagit Bay PEs compared to adjacent nearshore areas (Beamer et. al., 2003). Over 80 percent of the historical PE habitat in the Whidbey Basin has been altered or permanently lost due to anthropogenic activities.

The Skagit River System Cooperative (SRSC) is uniquely qualified to carry out the nearshore salmon habitat restoration feasibility and design work proposed here. For over 10 years SRSC has been studying habitat use of juvenile Chinook salmon in Skagit Bay to identify opportunities for successful and sustainable habitat restoration. SRSC is involved in an ongoing intensive fish sampling program which has recently expanded the geographic scope of the current Skagit Bay PE research to more fully understand the role of non-natal PE in nearshore juvenile salmon ecology. In addition, SRSC has developed a geomorphologic model for nearshore habitat mapping and change analysis that predicts nearshore salmon habitat potential and restoration outcomes, and has begun to look at the effects of projected sea level rise on tidal marsh communities in the Skagit Basin. The cooperative has also designed more than 20 successful restoration projects over the past 30 years including several estuarine projects.

Previously Funded SRFB Projects

This proposal will incorporate and build on data from previously funded SRFB projects. These projects include:

- Island County Nearshore Habitat Assessments (Round 2, Is. Co. MRC)
- Phase 2 Nearshore Assessments (Round 3, Is. Co. MRC)
- English Boom (Round 4, WDFW)

II. PROBLEM STATEMENT

The purpose of this feasibility assessment is to look at geomorphic and biological processes that will affect the success and sustainability of salmon habitat restoration/protection at 10 of 12 PEs in Skagit Bay and to involve shoreline property owners in restoration and protection of these sites, with the ultimate goal of identifying as many willing landowners at the 10 sites as possible, and proceeding with a 30% restoration/protection design on the highest priority site that has willing landowners.

Feasibility assessment is an important initial step for successful, sustainable salmon habitat restoration projects in Skagit Bay. There are important data gaps at each of the 10 target PE sites that need to be filled in order to adequately evaluate and prioritize protection and restoration sites. This project addresses several of these gaps. In addition, previous restoration efforts in Island County have been delayed or thwarted by property owner concerns and resistance. In part, this results from a lack of understanding of the importance of the nearshore areas to both humans and aquatic species, and in part it is due to a failure to establish relationships and trust with the property owners. Over 80 percent of the Skagit Bay shoreline is privately owned. Restoration and

protection is dependant on landowner participation. Landowner outreach has been included in this feasibility assessment as a means to initiate communication with property owners and to identify willing landowners for restoration/protection projects.

III. PROJECT OBJECTIVES

The purpose of the project is to assess restoration/protection feasibility at ten of twelve nearshore sites in the Skagit Basin area of Geographic Priority Area 1, and from that group of sites to prioritize restoration/protection actions and complete 30% design for a nearshore habitat restoration/protection project with a high likelihood of near term success and long-term sustainability. The 10 sites include from southeast to northwest, English Boom Park, West Arrowhead Lagoon, Utsalady Point, two unnamed sites in Utsalady Bay (near town), Strawberry Point, Mariners Cove, Dugualla Heights, Coronet Bay Marina, and Coronet Bay (Figure 1).

The feasibility assessment will be based on 4 components:

- 1) Existing habitat conditions,
- 2) Habitat restoration potential and sustainability, and
- 3) Landowner willingness to allow and participate in restoration and protection efforts at each of the ten target PEs.

Existing Habitat Conditions

Objective 1: Integrate existing data and map current habitat conditions at ten PEs.

Recent efforts (listed in Section 14b above) have identified and mapped existing hardened shoreline areas, forage fish spawning areas (prey species for salmon), eelgrass and kelp areas (habitat for forage fish, juvenile salmon, Dungeness crab and other species), and feeder bluffs and accretion shoreform areas. Studies have also looked at cursory restoration potential for several sites within the study area (Sheldon and Associates, 1999), and have mapped general shoreline habitat classifications (Beamer et. al., 2005; WDNR, 2001) and nearshore protection priorities (Anchor Environmental, 2002). All of these studies have assessed existing habitat conditions to varying extent and detail, and some have considered historical conditions (based on historical photos) and restoration potential. SRSC will integrate and add to these data to characterize existing habitat zones and subzones.

Objective 2: Identify and evaluate current and historical freshwater inputs to ten PEs.

Nearshore freshwater inflow to PEs, which are vital to Island County nearshore estuarine conditions, is a data gap in our picture of existing conditions. Freshwater wetlands, seeps, intertidal groundwater flow, streams, storm water outfalls, and roof and footing drains provide important estuarine microcosms along the shoreline. High freshwater inflows influence temperature, salinity, and nutrient concentration of the intertidal substrate. These qualities in turn affect the distribution of intertidal vegetation, benthic invertebrates, and fish (including juvenile salmon and forage fish such as sand lance and surf smelt). Thus, understanding the patterns and effects of freshwater inputs to the PEs is critical to identifying, protecting, and restoring nearshore habitat function.

Objective 3: Map and evaluate marine riparian conditions influencing ten PEs.

Marine riparian areas provide shade, detrital input such as insects and organic material and large wood that fall into the nearshore area, and influence bank stability and sediment inputs. Organic input (insects, branches, twigs, leaves, etc.) contributes important detritus for foodweb support of benthic organisms and fish. This input material contributes to the area where it is deposited but is also often exported to depositional coastal areas. In these cases marine riparian conditions impact salmon habitat beyond the immediate zone of deposition. SRSC will develop a conceptual model of marine riparian function and map the marine riparian zone within drift cells that are functionally connected to the ten PEs in the context of these functions.

Habitat Potential and Sustainability

Objective 4: Reconstruct historical habitat conditions to evaluate habitat potential at the ten PEs.

SRSC will map historical nearshore zones and intertidal subzones to evaluate the habitat potential at each site based on pre-settlement habitat conditions.

Objective 5: Identify the function and sensitivity of nearshore processes to evaluate habitat sustainability.

SRSC will prioritize and design restoration based on a landscape process framework for habitat analysis and will examine the current function and restoration potential of processes contributing to the formation of target PEs. This work builds upon and complements the recent Island County feeder bluff and accretion shoreform study to direct habitat restoration and protection efforts to areas that will be self sustaining and long lived.

Objective 6: Evaluate potential future land use and zoning impacts on site restoration potential.

The existing zoning, shoreline, and long range planning maps will be overlain on the PE maps to assess potential impacts from current and future development proposals. SRSC will coordinate with Island County staff to obtain the most recent information.

Landowner Willingness

Finally, because most of the shoreline area within Geographic Area 1 is privately owned with small lots surrounding most of the PEs, it is especially vital to begin outreach to identify willing landowners and to improve awareness of the importance of the health of the nearshore areas to aquatic species and public health and welfare.

Objective 7: Identify willing landowners

Island County MRC will conduct landowner outreach to identify landowner willingness and obtain landowner willingness/agreements for restoration/protection at the 10 target sites.

IV. PROJECT APPROACH AND METHODOLOGY

Approach

The project will be approached with two levels of feasibility effort, followed by design. The first level will be applied to all 10 PEs. The second level will provide a more detailed assessment for those sites that have landowner willingness. Design will be completed only for the most feasible site. A summary of the activities that will occur at each level is as follows:

Level 1

1. Outreach to landowners to obtain willingness/agreements
2. Compile existing data into habitat conditions maps for each site
3. Identify and map obvious freshwater sources
4. Assess marine riparian function
5. Assess salmon and forage fish accessibility
6. Reconstruct historical habitat zones and sub zones where possible
7. Evaluate landscape-level geomorphic process functions
8. Evaluate land use impacts on process and habitat functions

Level 2

1. Conduct a more detailed examination of freshwater inputs
2. Conduct a more detailed sediment transport and source analysis

30% Design for the site with:

1. Willing landowners

2. Greatest potential for fish use and access
3. Greatest potential area to be restored with a healthy and diverse habitat
4. Greatest potential for long-term process and habitat sustainability in light of zoning and land use

Methodology

1. Landowner Willingness

The Marine Resource Committee has been very successful in reaching out to shoreline owners through the Shore Stewards program in Island County. Recent funding from the Northwest Straits Commission has been dedicated for expansion of the Shore Stewards program and increased citizen outreach efforts. As a result, the MRC will take the lead on landowner outreach to shoreline owners at the 10 target sites through the citizen based volunteer Shore Stewards program to increase awareness of nearshore processes and to recruit willing landowners for restoration and protection projects. This outreach will be customized landowner education about biological and geological processes specific to each of the PEs to facilitate landowner vesting and willingness. Outreach efforts will include personal home visits, community meetings, distribution of informational pamphlets, etc. Outreach will occur at the same time that the feasibility assessment is being conducted and is expected to span the two-year project period.

2. Mapping Current Habitat Conditions

Habitat zones (upland, back beach, intertidal and subtidal) and intertidal subzones (beach face, emergent marsh, channel, impoundment, and low tide platform) will be delineated for each PE and compiled into a map with existing vegetation, substrate, shoreline modifications, and longshore drift data. Zones and subzones will be mapped digitally using high-resolution aerial photos and LIDAR and then field verified. New freshwater inputs and marine riparian conditions data will be added to these maps.

3. Freshwater Inputs

Identification and evaluation of nearshore freshwater inflow sources will include compilation and evaluation of existing County stormwater outfall and stream data, MRC outfall data, and other available public and private data to look at historical and current freshwater inputs and where input has been impacted. Contributing watershed areas will be refined using Island County LIDAR and the watershed area to shoreline length ratio will be determined to assess nearshore zones with the highest potential freshwater influence. For Level 2 sites, field observations will be conducted at low tide during winter and spring when surface flows are at their highest, and most likely to be detected. Salinity readings may be taken in areas of suspected groundwater influence (identified by changes in vegetative communities or epiphyton along the shoreline). Existing information will be compiled into one GIS data layer and will be supplemented with the new field findings.

4. Marine Riparian Conditions

The marine riparian zone will be inventoried to identify shade, detrital and LWD contribution, slope stability, and sediment input function. Findings will be mapped on aerial photos. Riparian conditions will be compared to the drift cell and forage fish data to identify potential restoration issues.

5. Reconstructing Historical Conditions

Pre-development conditions will be reconstructed and mapped digitally to the zones and subzone level where possible using geologic maps, historical geodetic and land survey maps, and historical aerial photos. These maps will be analyzed for habitat area and components to evaluate the potential for restoration and restoration benefits to salmon.

6. Geomorphic Processes and Functions

SRSC will compile geologic, longshore drift, and topographic data for analysis of site and adjacent drift cell function and identify impacts to natural processes (longshore sediment erosion, transport, and deposition within littoral cells; tidal erosion; tidal range, volume, and bathymetry; fluvial deposition, etc.) including shoreline hardening, groins, freshwater diversions, etc. and their interactions that affect maintenance and sustainability of PE habitat area and function. This will be done using existing data and some field mapping,

For Level 2 sites, a more detailed sediment transport and source analysis will be conducted to identify specific actions that could address process impacts. The geomorphic analysis will be evaluated together with the LIDAR, and biological analysis to determine overall site restoration potential.

7. Potential Future Land Use Impacts

To evaluate how full build out may effect a potential restored site, zoning and long-range planning maps will be overlaid on habitat potential maps.

8. 30% Design

30% design will be site-specific and based on the feasibility assessment. Any site design will stress protection and restoration of nearshore processes and functional components that naturally maintain PE systems.

Adequacy of Design in Addressing Objectives

All methodologies proposed for the feasibility assessment have been proven through previous studies. The geomorphic model was originally used to identify sites that are currently, or were historically, PEs. The study found that certain upland topography (a surrogate for tectonic and geologic history) and substrate material (a surrogate for cohesion and geologic history), when acted upon by a given landscape process or combination of processes, will produce and maintain a predictable suite of nearshore habitat conditions. So far, the model's prediction accuracy has been 100% with more than 75% of predicted PEs validated. One additional PE was discovered during field verification (error of omission).

Setting the Stage

When completed, this project will:

1. Provide the framework for restoration and protection at 10 PEs and their process cells along the coast of Island County, in Skagit Bay,
2. Prioritize restoration and protection actions for Chinook recovery at the landscape and site level,
3. Identify willing landowners for restoration and protection projects,
4. Obtain landowner agreements where possible,
5. Identify communities where focused outreach and education are needed to forward restoration and protection efforts in the future and,
6. Provide a 30% design for the highest priority site with landowner willingness.

Products

This project will result in:

1. A detailed technical report that identifies:
 - current and historical conditions (habitat potential) at each of the 10 nearshore sites,
 - the processes needed for restoration and habitat sustainability at each of the sites,
 - willing landowners and/or communities for each site,
 - areas where focused landowner outreach is needed,
2. Signed landowner willingness and/or landowner agreements for as many properties surrounding the 10 sites as possible, and,
3. A 30 percent design for the highest priority restoration and/or protection site with landowner willingness

Project Partners

- Island County Marine Resources Committee (landowner willingness)

Other Approaches Considered and Rejected

To evaluate restoration and protection in the Skagit Basin from a landscape/process scale, SRSC originally considered two additional sites for restoration and protection prioritization. Ala Spit which is located in northeast Whidbey Island is proposed for similar site specific assessment by Island County and was therefore removed from the proposal. Dugualla Bay which provides the highest habitat restoration potential due to large size and connectivity to the North Fork Skagit River, has been identified as “off limits” by the Island County Commissioners due to concerns that restoration activities may have impacts on the viability of the navy base.

Cost Estimates

Costs are based on estimated office analysis, GIS and report writing time, field time, landowner outreach, and equipment and materials costs.

IV. TASKS AND TIME SCHEDULE

January-June 2006

- Gather existing GIS data from previously completed studies and freshwater inflow sources. Meet with Marine Resources Committee to discuss existing data and initiate the landowner outreach efforts. (MRC/SRSC)
- Initiate landowner contacts. (MRC)
- Gather existing data and begin evaluation of biologic conditions and vulnerabilities. (SRSC)
- Begin field work to fill data gaps in freshwater inflows to nearshore area (SRSC)
- Begin evaluation of existing topographic and LIDAR data. (SRSC)
- Begin geomorphic analysis. (SRSC)

July-December 2006

- Continue landowner outreach and willingness/agreement efforts. (MRC)
- Continue freshwater inflow mapping (SRSC)
- Field verify elevations at Level 2 sites and link to vegetative communities. (SRSC)
- Begin marine riparian vegetation evaluation at Level 2 sites and link to elevation data. (SRSC)

January-June 2007

- Continue landowner outreach and willingness/agreement efforts. (MRC)
- Complete Level 2 assessment of freshwater inflows to nearshore areas. (SRSC)
- Complete Level 2 geomorphic analysis. (SRSC)

July –December 2007

- Continue landowner outreach and willingness/agreement efforts. (MRC)
- Compile and assess biologic and geomorphic data for the report. (SRSC)
- Rank restoration priorities at the landscape and site level based on findings. (SRSC)
- Prepare report on feasibility assessment for all 10 sites. (SRSC)
- Prepare a 30% design on the most feasible site.

V. CONSTRAINTS AND UNCERTAINTIES

The feasibility assessment may be limited by several factors. Level 2 evaluations may require access to private properties. Access will be requested on a case by case basis and these opportunities will be used to inform and educate landowners. Restored habitat predictions will be limited to the resolution of the LIDAR and field confirmations. Subtidal freshwater inflows will only be mapped in the locations where they can be depicted.

Appendix A

Figures



Figure 1: Skagit Basin Restoration and Protection Feasibility Assessment Sites

Appendix B
Project Partner Contribution Forms

16. Project Partner Contribution Form

Project Partner: Island County Marine Resources Committee

Partner Address: 101 Sixth Street, PO box 5000, Coupeville, WA 98239

Contact Person

X Mr. ☐ Ms. Title **Director, Island County/WSU Extension**

Fiscal Lead: **Donald B. Meehan**

MRC Chair: **Phyllis Kind**

Lead Sponsor Representative : **Gary Wood**

Contact Mailing Address: **101 Sixth Street, PO box 5000, Coupeville, WA 98239**

Contact E-Mail Address: **Meehan: Meehan@wsu.edu**

Wood: intertidal.consulting@verizon.net

Description of contribution to project: **Financial and volunteer contributions.**

Estimated value to be contributed: \$ 10,000



Partner's signature

June 8, 2005
Date

Response to SRFB 2005 Round Review Panel Ratings and Narratives
Draft dated 12-7-05
King County WRIA 9

December 13, 2005

WRIA 9 Response

We disagree that the list of projects is broad and broadly applied. Our strategy and its portfolio of priority projects is as close of a focus for the Green River Chinook salmon population as possible and appropriate. *The focus of both the strategy and the list of projects address the Viable Salmonid Population (VSP) attribute of productivity by improving spatial structure.* This systems-based focus is not a negative as connoted in the ratings and narratives, rather it is necessary. We do not have the confidence to focus more finely, for example, on a specific geographic area and specific list of projects within it.

Ours is a systems approach to recovery which suggests something very different than too fine of a focus (which results in a forced and contrived prioritization). Our functional units are the sub-watersheds of WRIA 9 (Upper Green River; Middle Green River; Lower Green River; Duwamish River; and Marine Nearshore). After significant debate and analysis, we chose to use the sub-watersheds as the logical geographic units to work in and determined that the sub-watersheds are the appropriate scale to the population dynamics of the Green River Chinook salmon population.

Working hand-in-hand with the Puget Sound Technical Recovery Team (PSTRT), we spent a significant amount of time and resources in 2004 and 2005 discussing alternative ways to approaching explicit watershed-wide priority setting and identifying priorities among sub-watersheds. We learned from this experience that it is critically important to recognize that the need to prioritize among sub-watersheds is not a given. The contrasting perspective that we took (with PSTRT guidance) is that actions are required in all sub-watersheds and all habitat types. The rationale for this perspective is that the habitat degradation is so widespread, and that the Green River Chinook salmon population is so depressed, that conservation planning needs to broadly focus across the landscape. Any attempt to focus at a finer scale, targeting specific problems or issues, is premature.

Nonetheless, to push ourselves as far as possible to narrow our priorities, we developed a “contingency matrix” to inform watershed-wide priorities. The approach was based on a consideration of how alternative population models, along with potentially limiting habitat features, could be used in a structured decision process for identifying watershed-wide priorities. We reviewed each sub-watershed, summarized the key ecological functions that they provide, reviewed the factors for decline and limiting factors, and summarized the priority conservation hypotheses and habitat priority actions (the

attached Table 1 summarizes this information). Three overarching themes emerge from the analysis:

- Limiting spawning habitat;
- Limiting juvenile rearing habitat; and
- Limiting estuarine transition zone habitat.

All of these limiting habitats (or as we termed them, “bottlenecks”) rise to the level of a potential watershed priority. Based on the information that we collected on each sub-watershed and their limiting habitats, it was difficult to make a strong case that any one limiting habitat or bottleneck, if enhanced or eliminated, was so clearly the solution that the vast majority of the protection and restoration effort in WRIA 9 should be focused on only one limiting habitat in small geographic areas of the watershed. Indeed, our scientists deemed, and the Steering Committee concurred, that all three of the identified limiting habitats—spawning habitat, rearing habitat, and transition zone habitat—represent critical issues that are reflected in high priority conservation hypotheses. Based on the lines of evidence and the conservation hypotheses, therefore, and the lack of any compelling evidence that clearly singles out any one limiting factor (at the expense of having to relegate the other factors to a lesser watershed-wide priority), it was agreed that all three be considered high priority.

Once it was agreed that all three factors are limiting, roughly equivalent priority was placed on each, with the emphasis within a sub-watershed being driven by where the ecological function is provided. That is, a priority was placed on expanding the Duwamish Estuary Transition Zone habitat in the Duwamish Sub-watershed; a priority was placed on expanding and enhancing spawning habitat in the Middle Green and Lower Green Sub-watersheds; and a priority was placed on expanding and enhancing rearing habitat in the Middle Green, Lower Green, Duwamish, and Marine Nearshore Sub-watersheds.

Indeed, the Puget Sound Technical Recovery Team says the following about the consistency and specificity of our habitat projects and other actions with the Puget Sound Salmon Recovery Plan:

“The actions are considered to be consistent with the strategy. In the plan the PSTRT reviewed, the actions were organized by the conservation hypotheses and prioritized into tiers based on their predicted (qualitative) effect on the VSP attributes of most concern in the geographic area. The major actions are now linked logically to the strategy through the conservation hypotheses which have both geographic specificity and VSP specificity.”

King 9

MEMORANDUM

December 14, 2005

TO: Rollie Geppert

FR: Doug Osterman, WRIA 9 Watershed Coordinator

RE: **Review Panel Ratings and Narratives Draft 12-7-05**

From the conversation I had yesterday with some of the Review Panel members, I understood the Review Panel to believe that our strategy and project list lack focus. As you know, I distributed copies of the documents that provide clarity on the approach we used to identify priorities for Chinook salmon recovery in the watershed. I reiterate the importance of the review of these documents because we believe they very clearly describe how we narrowed the focus of our actions extensively to both meet the needs of the Salmon Recovery Funding Board and NOAA Fisheries. WRIA 9 did not know, moreover, that the Review Panel did not have Table 8-2 from Chapter 8 of our strategy that demonstrates our specificity and focus until we met on November 30. It is very important that you review Table 8-2 (which was photocopied and distributed to Review Panel members that day) because it is the culmination of an extensive process to be specific and focused, and to establish project priorities.

We also learned for the first time on November 30 that the Review Panel did not understand the method by which WRIA 9 identifies habitat projects to meet the highest priority needs of our habitat recovery strategy. While we solicited projects proposals, we made it expressly clear that WRIA 9 was only interested in proposals for projects that are included in Table 8-2. Again, from our perspective, 56 priority projects is NOT a large number of actions. Indeed, some scientists and policy makers would argue that we have focused too greatly because we do not have the confidence to narrow our actions to that fine of detail.

It was suggested yesterday that it would also help if we identified the other activities occurring in the watershed to restore salmon habitat that helps narrow the location and types of projects that WRIA 9 submits for SRFB funding. To that end, I refer you to Section 8.5, pages 8-6 through 8-25. These pages of our strategy include Table 8-2 (Summary of Priority Projects), as well as a description of major projects and programs that contribute to salmon recovery.

Please note that Policy I1 states, "Salmon Recovery Funding Board funds shall be targeted toward the highest habitat priorities for the recovery of salmon in WRIA 9 in accordance with the acquisition and project priority system established in Policy MS1 [please see page 5-16], and guided by the technical habitat management strategies of Chapter 5". Please do not underestimate the importance of Policy I1. This policy directs

every local government and other implementers in WRIA 9 to focus on three habitat needs of the watershed to increase the productivity of the Green River Chinook salmon population: (1) transition zone habitat in the Duwamish River Estuary; (2) rearing habitat in the Middle Green River, Lower Green River, Duwamish River, and Marine nearshore; and (3) spawning habitat in the Middle Green River and upper Lower Green River. Policy I9 on page 8-25, furthermore, outlines the coordination required with other funding sources and programs that helps to narrow the projects that we seek funds from the SRFB.

The six salmon habitat project proposals that we submitted in 2005 for funding by the SRFB all focus on two of the highest priority habitat needs to increase productivity, namely, rearing habitat in the marine nearshore and Lower Green River and spawning habitat in the Middle Green River. The six projects were all deemed as strong technical projects that will benefit Chinook salmon with certainty by Review Panel and nearshore science members. None of our projects were designated as Projects of Concern (POC). The ranking of our list of six projects was determined by a panel of scientists and planners who used the Benefit to Salmon and Certainty of Success criteria of the SRFB. The Steering Committee endorsed the ranking because it fit seamlessly with the management strategies of the WRIA 9 Salmon Habitat Plan (Chapter 5).

We appreciate the time and effort that it takes the Review Panel to evaluate strategies and projects submitted by 25 Lead Entities, and greatly appreciate this opportunity to provide you with more information. I am attaching the written response that I submitted to the Review Panel in the meeting yesterday. In addition to the comments above, I would like the document and the watershed prioritization reports that I delivered to the Review Panel on December 13, 2005, to be considered as official response from WRIA 9 to the Review Panel Ratings and Narratives.

6.5 – East Kitsap WRIA 15 Salmon Recovery Planning Implementation and Habitat Analysis Matrix

The planning area for the East Kitsap Water Resource Inventory Area (WRIA) 15 and the E. Kitsap WRIA 15 Lead Entity includes the streams on the east side of the Kitsap, Key, and Gig Harbor peninsulas, and Bainbridge, Anderson, McNeil and Fox islands that drain toward Puget Sound, together with their watersheds, the nearshore and marine waters. The planning area has about 270 miles of shoreline that includes many inlets with quiet, shallow waters which are ideal foraging and rearing habitat for juvenile salmon. Juvenile salmonids are present along the shoreline in high numbers from March through July and in lower numbers throughout the year. Nearshore waters of East Kitsap support Chinook, coho, chum and pink salmon, cutthroat trout, and some steelhead trout. The numerous small streams in the East Kitsap region primarily support chum and coho salmon, steelhead and cutthroat trout. Chinook spawning, incubation and rearing have been identified in some of the larger streams. The streams do not support the standard Chinook conditions, for they are groundwater- and rainwater-supported with no high-altitude supportive snowpack, and consequently are both warmer and with lower flows than standard habitats. There are no genetic stock identification data for naturally spawning Chinook in this area.

Salmon recovery planning in the East Kitsap planning area is an *integral part of the larger regional salmon recovery effort*, and has been developed with the recognition that the nearshore and marine areas play an important role in providing support for Chinook salmon from the South/Central Puget Sound region. To protect and restore the nearshore and marine areas, the City of Bainbridge Island and Kitsap County have each developed recovery plans for their subareas with slightly different approaches, based in part on the different states of completion of environmental assessments.

The combination of programs and programmatic actions that is described in this E. Kitsap WRIA 15 chapter in the *Puget Sound Salmon Recovery Plan* represents a comprehensive effort to conserve and restore salmon habitat using a **multi-species, ecosystem approach** (see sections 5.0 and 6.1, *above*). The E. Kitsap WRIA 15 Lead Entity's ***Salmon Habitat Restoration Strategy*** (see Appendix G) is an important component in the implementation of the E. Kitsap recovery planning effort, and serves the purposes of identifying and characterizing potential salmonid conservation and restoration areas, and setting forth the criteria for salmon recovery project selection. The *Strategy* is periodically updated by the Lead Entity, and is intended to be fully integrated with and supportive of the salmon recovery planning in this chapter.

The **goal** of the E. Kitsap WRIA 15 salmon recovery planning and of the Lead Entity's *Salmon Habitat Restoration Strategy* is to restore healthy self-sustaining wild populations of the salmon species that are native to the streams and shorelines of the Kitsap Peninsula. Four **objectives** to accomplish this goal are:

- Increase population levels,
- Maintain geographically diverse populations,

- Promote the preservation and restoration of healthy, functioning ecosystems, and
- Increase public understanding and support for salmon recovery.

Kitsap County and the City of Bainbridge Island have developed **conceptual models** for habitat restoration and ecosystem-based salmon recovery (*see* Figures 6.1 and 7.3). These models illustrate the interaction of existing information sources and programs with the ecological factors that drive salmon habitat conservation and restoration in E. Kitsap WRIA 15 planning area.

The **hypotheses** that serve as a basis for the East Kitsap portion of the Salmon Recovery Plan are:

Habitat Hypothesis

East Kitsap streams and refugia, and nearshore habitats are important to a variety of populations of Puget Sound Chinook salmon, other salmonids, and other fish species (“multi-species use”). Land use and direct modification of salmon habitats has altered habitat-forming processes (e.g., hydrology in freshwater systems) and structure (especially through filling and armoring in the nearshore) that has reduced the ability of these habitats to support salmonids and other species, especially juveniles.

Hypothesis regarding the Viable Salmon Population (VSP) parameters that most limit salmon recovery

The VSP functions that are provided to individual salmon—spatial structure and diversity—are the parameters that most limit salmon recovery in the East Kitsap planning area.

Data from the Bainbridge Island nearshore assessment and from the Kitsap Refugia Report and other sources document many changes from historic shoreline profiles—often human-caused—as well as anthropogenic modifications to shoreline and stream margins, and modification to wetted and upland areas. There are few data on the historical abundance or use of the streams or nearshore of East Kitsap by Chinook salmon; for that matter, there are still relatively limited understanding or data regarding the use and VSP parameters of the nearshore areas in other parts of Puget Sound.

Kitsap County has prepared a **Habitat Analysis Matrix** (*see* Table 6.1, *below*) to describe the principal nearshore species or critical habitat types (including a description and the functions that are provided to salmon), potential threats and stressors to those habitats, the protective measures that are currently implemented by Kitsap County, gaps in scientific knowledge or regulatory authority, measures that are planned to address the threats and gaps, and possible actions that may be undertaken if necessary resources are available. The City of Bainbridge Island provides for near-term, mid-term and long-term evaluations of progress in protecting and restoring habitat functions and values. The City’s monitoring efforts link processes to the nearshore habitat structure, integrate a multitude of nearshore habitats that support a variety of functions, establish relationships

between structure and function, and link local processes to the broader Puget Sound ecosystem.

Based on the East Kitsap nearshore assessment, subsequent data from monitoring in E. Kitsap and Bainbridge Island, and data and analyses produced here and elsewhere, the above hypotheses may be modified, augmented, or replaced. Monitoring and other information may bring a better understanding of the particular nearshore functions that are most critical to salmon use. The contribution of various elements (such as pocket estuaries) may be re-evaluated.

Key Strategies and Actions that Support the Overall Approach to Salmon Recovery

Assessments

Completed—Kitsap County has completed a salmonid refugia study, and the City of Bainbridge Island (COBI) has completed a marine nearshore assessment. The Washington Dept. of Fish and Wildlife has completed an upland wildlife habitat assessment for Kitsap County (important to land use effects analysis).

In Process—Kitsap County will begin a marine nearshore assessment during 2005, which will result in an inventory and characterization of nearshore functions and attributes. COBI will conduct a subwatershed assessment that will inventory and characterize habitat, fish passage, hydrology, and land use. Both studies will identify actions in these areas to achieve their goals.

Protection and Restoration

Protecting and restoring marine nearshore areas is considered a priority based on benefits to all salmon stocks using these waters. High-priority freshwater activities in the Lead Entity and County and on Bainbridge Island include land acquisition and projects addressing fish passage restrictions in streams that provide important salmon refugia, productive capacity, and habitat.

Regulatory Tools

Local Tools

- Comprehensive Plan compliance review
- Shoreline Master Programs review and revision
- Critical Areas Ordinance review and revision
- Compliance with NPDES Phase II requirements
- State Environmental Policy Act (SEPA) review

State Tools

- WA Hydraulics Code and Hydraulics Project Approval
- WA Priority Species and Habitats
- Shoreline Master Programs review and revision
- Growth Management Act and Best Available Science rules

Federal Tools

Clean Water Act Section 404 (and sometimes Rivers and Harbors Act Section 10) permit
Clean Water Act Section 401 water quality certification
Endangered Species Act and biological assessments (including Magnusson–Stevens Act Essential Fish Habitat evaluation)
Coastal Zone Management Act certification

Harvest and Hatchery Management

Salmon harvest is conducted by the co-managers (the Suquamish Tribe and Wash. Dept. of Fish and Wildlife) under the guidance of the *Harvest Management Plan for Puget Sound Chinook* (part of the *Comprehensive Chinook Management Plan* to guide recovery of Chinook in Puget Sound). Hatchery operations (State and Tribal) are governed by resource management plans (which include hatchery genetic management plans, the State/Tribal Fish Health Policy, and other elements. Both Hatchery and Harvest elements are presently covered by a Section 4(d) exemption issued by NOAA-Fisheries.

Adaptive Management

Kitsap County is currently developing an adaptive management and monitoring and plan. Inventory and analysis techniques first applied to Bainbridge Island will be applied beginning in late 2005 through 2007 to the East Kitsap shoreline as a basis for a “change” evaluation.

The City of Bainbridge Island provides for near-term, mid-term and long-term evaluations of progress in protecting and restoring habitat functions and values.

Kitsap County and the City of Bainbridge Island will acquire new local data for the nearshore based on the (hypothetical) links in the conceptual models (*see* Sections 6.1 and 7.3) and the hypotheses of multiple population use.

Kitsap County and the City of Bainbridge Island will work with the conceptual models and apply data and understanding that are developed locally and regionally to better link the changes in habitat volume and structure to VSP attributes in the nearshore and tributaries.

Protection is the primary salmon recovery strategy for the nearshore and marine environments. Salmon recovery planning relies on a suite of tools that includes regulatory programs, enforcement, incentives, and education to provide effective protection.



KITSAP COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

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Cindy Baker, Director

December 12, 2005

Salmon Recovery Funding Board
c/o Heather Balcomb
P.O. Box 40917
Olympia WA 98504-0917

The following comments on the Draft Review Panel Evaluation and Staff Report are respectfully submitted by the East Kitsap Peninsula Lead Entity for consideration when finalizing your report.

1. The name of our Lead Entity is "East Kitsap Peninsula," *not* "Kitsap County," which is the name you used in the ratings communications. While the Lead Entity Coordinator position is held by a Kitsap County employee, the geographic area of the East Kitsap Peninsula Lead Entity does not include all of Kitsap County. (It excludes the portion of the county that drains to Hood Canal.) Furthermore it extends into Pierce County (and a bit of Mason County) all the way down into deep South Puget Sound at Anderson Island.
2. Comments on the narrative for the "Fit of the Project List to the Strategy or Recovery Plan":
 - a. The Narrative for our Lead Entity states that the project list "only generally" addresses highest priorities. The phrase "only generally" is not relevant: the fact is that the project list *does* address the highest priorities.
 - b. The Narrative states that "all projects do not address Chinook." This statement suggests that the review panel is looking over-simplistically at how the Lead Entities—and ours in particular—are approaching salmon recovery.

Since we are talking about the *Recovery Plan* as a guide to the Lead Entity, reference to our chapter in the *Recovery Plan* is relevant. In the East Kitsap Peninsula, Chinook salmon spawning, incubation and rearing have been identified in some of the larger streams. The streams do not support the standard conditions for Chinook salmon, for the streams are groundwater- and rainwater-supported with no high-altitude supportive snowpack, and consequently are both warmer and with lower flows than are standard habitats. No matter: the Chinook salmon use them anyway. But this fact does not make our area or our streams (those that are used by Chinook salmon and those that are not) of lower priority: salmon recovery planning in the East Kitsap Peninsula is an *integral part of the larger regional salmon recovery effort*, and our planning for salmon recovery has been developed with the recognition that, in addition to spawning, our streams, nearshore and marine areas play an important—even vital—role in providing support for Chinook salmon from the South/Central Puget Sound region.

Chinook-centric planning here does not conform to reality. Thus, the highest priority projects in this Lead Entity are not—and will not be—Chinook-centric. Both the East Kitsap Peninsula *Salmon Habitat Restoration Strategy* and the East Kitsap chapter in the draft *Puget Sound Salmon Recovery Plan* incorporate a **multi-species approach**. The projects on the list *do* reflect the highest priority actions and areas:

Protecting and restoring freshwater and marine processes that support Chinook salmon habitat and food sources.

For additional details, *please see* the attachment to this letter, entitled "6.5 - East Kitsap WRIA 15 Salmon Recovery Planning Implementation and Habitat Analysis Matrix." This is Section 6.5 in the final version of our chapter in the draft *Recovery Plan*.

- c. There are actually *two* projects in the Chico Creek watershed on our list: the reference to “the project in Chico” is therefore unspecific. But more importantly, contrary to the statement in the Narrative, both projects on Chico Creek reflect the highest priority. Chico Creek is the most productive salmon stream in the entire Lead Entity area. Chico Creek does support Chinook salmon spawning, and these projects both protect and restore salmon habitat.
 - d. It is true that the Ollala project is in a Tier-2 stream. But that does not mean that this is not a high-priority action for this Lead Entity. There are two points regarding this that I would like to make:
 - i. As you know, the legislation for the SRFB funding states that the funding should go to projects that are identified in the *Limiting Factors Analysis*. The Ollala project is the number-one-ranked recommended action for the entire Ollala watershed. The area upstream of this culvert, which would be made accessible by this action, is not representative of the rest of the watershed—it has not been impacted by impervious surfaces or deforestation, and will provide access to nearly two miles of good salmonid habitat.
 - ii. Watersheds are prioritized in recovery tiers based on their salmonid diversity, habitat quality and watershed size. The ranking scheme is only part of the evaluation process for East Kitsap SRFB projects. The fact that this project is in the second half of the Lead Entity list indicates recognition that this is in the second tier of streams.
3. Comments on the narrative for the “Fit of Project Ranking”:
- a. The Lead Entity recognizes that “prioritizing all nearshore areas as tier 1 is not specific.” But, given that we have not completed our nearshore assessment, and given the discussion above about the crucial value of the nearshore, this approach is necessary. When completed, the nearshore assessment that was funded in Round 5 by the SRFB will give us better tools for developing a prioritized nearshore list. In the meantime, the Lead Entity has developed a preliminary list of nearshore actions, which is found in Appendix C of the *Salmon Habitat Restoration Strategy*. Projects number 2 and 4 are both included in this list of actions.
 - b. We recognize that our project ranking is affected by scoring criteria to a greater extent than the *Strategy*. I have taken note of this and it will be addressed for the 7th round process.
 - c. Because the *Strategy* was completed prior to completion of our chapter for the *Recovery Plan*, the scoring for ranking was not customized to fit the specific and focused priorities of the draft *Recovery Plan*. Unfortunately, the timing of this year’s SRFB project list development, the fact that the Lead Entity Coordinator position was vacant for two months, and the timing of the submittal to Shared Strategy for the draft *Recovery Plan* all contributed to this part of the project ranking being insufficient.

Thank you for your consideration of these comments.

Sincerely,

Kathleen Peters
East Kitsap Peninsula Lead Entity Coordinator

Klickitat Lead Entity comments on the Draft 2005 Salmon Recovery Funding Board report

Dear SRFB Review Panel:

Thank you for the opportunity to comment on the Draft 2005 Salmon Recovery Funding Board report. Hopefully there will be an opportunity to meet with you early next year. Please communicate to SRFB that the meetings between the Panel and lead entities have been instrumental in the progress made to date; they are important and valued.

1. Species and Stocks

No comment on your finding for this criterion, other than thank you for the “Excellent” rating.

2. Watershed and Marine Ecological Processes

I think your finding is justified and look forward to discussing this strategy evaluation criterion with you to get input on ways to improve.

3. Habitat Features

I think your finding is justified and look forward to discussing this strategy evaluation criterion with you to get input on ways to improve.

4. Actions and Geographic Areas

No comment on your finding for this criterion, other than thank you for the “Excellent” rating.

5. Community Issues

The following program-level actions are provided in the in section 2.4 of the strategy to reach out to the broader community and address the community issues identified by the citizens committee:

- informing landowners about tax diversion opportunities and sources of funding available to compensate them for loss of revenues from historic land uses, such as the Natural Resource Conservation Service’s CREP (Conservation Reserve Enhancement Program) and Washington Department of Natural Resources’ FREP (Forestry Riparian Easement Program);
- encouraging landowners who have participated in successful conservation easement and acquisition projects to discuss the benefits and address the concerns of other landowners;
- requesting that applicants communicate with adjacent landowners;
- showing that trustees under conservation acquisition continue tax equivalent revenue to local governments and taxing districts;
- showing positive effect of aesthetic views that habitat protection provides to resale value of existing residential real estate;
- publicizing habitat restoration projects that have high probability of increasing groundwater resources for local landowners dependent on wells for water;
- publicizing that successful salmon habitat projects in prime locations ease pressure on other landowners in the watershed;

- publicizing and encouraging other volunteer efforts such as Yakama Salmon Corps and AmeriCorps programs for young men and women;
- publicizing projects that benefit salmonids and how the concerns of residents were addressed;
- performing and publicizing solid planning, design, and cost benefit of large projects and soliciting public input prior to final approval of project funding;
- encouraging project sponsors to maximize use of local companies, workers, and supplies in project implementation to provide economic benefit to community;
- providing active outreach to White Salmon River landowners to show benefits of anadromous fish presence (e.g. access to federal and state grants to assist agricultural landowners in conservation measures) and address questions on “ESA takings” concerns;
- encouraging/supporting a risk assessment prior to the introduction of anadromous fish above Condit Dam; and
- developing a list of programs that assist with funding for road maintenance.

Some SRFB funded projects (e.g., the Snyder Creek/Klickitat Mill fish passage restoration) have received positive press. However, outreach to the broader community through the mass media needs to be more effective and we are working to get more press coverage to support implementation of the strategy. The Lead Entity exhibit at the County Fair and presentations at public meetings, such as the Conservation District’s annual meeting with landowners, have been helpful in reaching a broader audience. Prospective project sponsors have been made very much aware of the community issues directly relevant to their activities and are responding by addressing them in their project approaches.

I submit that the strategy and its implementation meets my understanding of the criterion for Excellent. The strategy should be awarded an Excellent rating for this criterion. However, excellent or not, there is always room to improve and I look forward to discussing this strategy evaluation criterion with you to get input on ways to improve.

6. Certainty

The Klickitat Citizens Review Committee agreed by consensus to use the Ecosystem Diagnosis and Treatment (EDT) model, if it has input into the model and last say and agreement on the inputs. This is stated in the strategy. However, the Committee has not participated in the development of any of the models that have been run within the Klickitat Lead Entity area. Individual members of the Committee participated in the modeling efforts, but some walked away from the effort and/or rejected the work products for various reasons.

With respect to utilizing the available modeling results to increase confidence in the results of the analyses and interpretation, please consider the following from a model review report issued at the December 4-6, 2000 meeting of the Salmon Recovery Science Review Panel (RSRP). The RSRP is an independent science panel convened by NMFS to help guide the technical and scientific aspects of recovery planning for listed salmon and steelhead species throughout the West Coast. A number of problems with complex models are described in the RSRP's report, for example:

- "The more complex models become, the more easily one can twist them do almost anything, and the less reliable they become."

- "The conclusions to be derived are that large-scale models that attempt to capture the dynamics of many species, or that rely upon the measurement of massive numbers of parameters, are doomed to failure. They substitute sledgehammer simulation for analytical investigation and efforts to identify the few driving variables. Large models are bedeviled by problems of parameter estimation, the representation of key relationships, and error propagation."
- "As the number of variables increases, the potential for mischief increases."
- "When the data are not available for the needed estimates of parameter values, there is a tendency to insert values based on opinion or expert testimony. This practice is dangerous. The idea that opinion and "expert testimony" might substitute for rigorous scientific methodology is anathema to a serious modeler and clearly represents a dangerous trend."

The RSRP calls EDT a case study of these problems. In the report the RSRP also states:

- "The current version which uses 45 habitat variables might be a useful list of things to consider, but the incorporation of so many variables into a formal model renders the predictions of such a model virtually useless. Even more vexing is that EDT depends upon a large number of functional relationships that are simply not known, (and cannot be known adequately) and yet they play key roles in model dynamics. The inclusion of so much detail may create an unjustified sense of accuracy; but actually it introduces sources of inaccuracy, uncertainty and error propagation. Subjective efforts to quantify these models with "expert opinion" compound these ills."

The RSRP also says of EDT:

- "It suffers from severe overparameterization and opaqueness. Because it relies on expert opinion to determine parameter values it takes a more subjective approach. It appears impossible to validate this model by observations or experiments and difficult to pinpoint specific structural features or parameter assignments that might explain deviations from expected responses so as to improve model performance over time."

The RSRP restates:

- "EDT exemplifies how modeling should not be done. It is overparameterized, includes key functional relationships that cannot be known and cannot be tested, creates a false sense of accuracy, yet introduces error and uncertainty. Its very complexity makes it difficult to determine the effect of various assumptions and parameter values on the model's behavior and relation to data. The attempt at quantification through subjective "expert opinion" compounds these fatal weaknesses, especially the model's inability to confront and improve with confrontation of data."

I contact the NMFS' Northwest Fisheries Science Center. The scientist I spoke with at the Center had the same concerns about EDT as the RSRP. He sent me an Northwest Fisheries Science Center memo on EDT, which is less overtly critical of EDT than the RSRP Report and recognizes some uses for EDT. The following is from the memo:

"How can EDT best be used in recovery planning?

- 1) The best use of EDT is to generate hypotheses about likely effects of habitat influences and improvements that can then be tested through experiments.
- 2) Another excellent use of EDT is to identify what linkages between habitat and fish productivity or capacity should be given a high research priority - in other words, what "EDT rules" should we try to pin down with empirical data?
- 3) In the absence of any other tools or data, EDT can be used to indicate conservation priorities (like which areas in a subbasin warrant the most attention or what habitat attribute warrants attention). However, when EDT or other models are used to guide the actual allocation of management effort there must be before-and-after monitoring paired with untreated controls so that the effectiveness of the action can be assessed. This is essential in the case of EDT because it is a way of generating hypotheses, not a data system that tells us what the real situation is.
- 4) The "false sense of sense of precision" of EDT should never be forgotten. It is not clear whether we should accept 20 - 30% or 200 - 300 % differences as the basis for accepting differences as reliable. The basis for this is EDT's use of a series of nonlinear equations whose parameters are selected by "expert opinion".

"To summarize, EDT has limited use in setting recovery goals. When EDT is used to allocate management activity, such an application should be viewed as uncertain and that such a use must be carefully monitored. EDT should not be viewed as a database, because so little of EDT is actual measured data. In fact, one of NMFS' biggest worries about EDT is that the region will come to think of the expert opinion embodied in EDT as real data, and relax the pressure for collecting real data and for on-the-ground monitoring. Clearly EDT will be used in the region until something better comes along. In the mean time, however, we recommend extreme caution in its use. In the long-term the region should focus its efforts on developing tools that rely on empirical data and not expert opinion."

The "Model Synthesis Report" was published March 2, 2001 by the Independent Scientific Advisory Board (ISAB), which provides independent science review for Northwest Power Planning Council programs. The ISAB was less critical and/or more diplomatic in its assessment of EDT than the RSRP (NMFS' independent science panel). The "Primer on Ecological Modeling" and "The Theory of Ecological Modeling" sections of the "Model Synthesis Report" contain interesting information on modeling in a

management setting, uncertainty analysis, and the use of models in decision making. One point stated in the report:

"So, the worth of a model in a decision-making context depends on knowing how accurate its predictions are. All other things being equal, we of course prefer a more accurate model to a less accurate model. But if the model is substantially inaccurate, as is likely inevitable in Columbia River salmon management, knowing more about quantifying the inaccuracy is actually more important than making marginal improvements in the accuracy."

In the "Evaluation of the Modeling Efforts" section of the "Model Synthesis Report", the ISAB states:

"EDT scores very high marks for completeness of factors taken into account, and for spatial and temporal detail in the data it uses. It is not yet clear whether EDT is sufficiently rigorous about maintaining the separation between actual measurements and derived quantities, or in quantifying the uncertainty of derived quantities. The predictive modeling component of EDT is essentially an expert system-this is a systematic amalgamation of the judgment of a panel of experts that then gets coded into a set of quantitative relationships that can operate on the data input to generate predictions. In principal, the construction of an operating rule set from the expert judgment can be done in a way that is transparent and open to diagnosis. We do not know whether EDT has achieved this. The process of eliciting expert judgment may include obtaining opinion about certainty, but that too is expert judgment, rather than a statistical comparison to actual measurements. So it looks as if EDT does not yet include a satisfactory treatment of uncertainty."

Certainty is the most difficult the SRFB Review Panel's criterion for me to understand and comment on. Given the information from the independent science panels' reviews of EDT, I do not understand how one can say that a strategy that incorporates EDT modeling results would have less uncertainty than a strategy that does not incorporate EDT. If the Review Panel is aware of other independent science panel reviews of EDT, please let me know.

The Review Panel's point on the many data gaps that need discussion is well taken. The Citizens Committee attempted to address this matter in a diplomatic way in section 3.1, which states:

"The Klickitat Citizens Review Committee recognizes the above referenced studies and models are works in progress and have limitations. Their work products will be used as tools, but not the answer. They will be revised as more data and information become available."

I have not looked at other lead entity strategies to see if they have more published data available than we do. I have looked at one of the regional recovery strategies and do not see that they have more published data on a basin by basin basis. I believe that relative to the other lead entities, we are in the middle, i.e., "Good/Fair".

I do not envy you job of evaluating strategies for the “Certainty” criterion. I look forward to discussing this strategy evaluation criterion with you to get input on ways to improve.

7. Actions and Geographic Areas

No comment on your finding for this criterion, other than thank you for the “Excellent” rating.

8. Fit of Project Ranking

No comment on your finding for this criterion, other than thank you for the “Excellent” rating.

Again thank you for the opportunity to comment. I appreciate your efforts.

Have a happy holiday season.

Sincerely,
Dave McClure
Klickitat LE Coordinator

PROJECT OF CONCERN RESPONSE

Lead Entity: Lower Columbia Fish Recovery Board

Project Sponsor: Lower Columbia Fish Recovery Board

Project Name: Influence of Carcass Analogs

Project Number: 05-1616N

Review Panel Comments: The project has a high cost relative to the anticipated benefits. There is insufficient information on the study design and technical approach.

The initial SRFB funding with sponsor match was meant to support two years of analog placement in two basins. Due to budget shortfalls, funding was only sufficient to support one year of work in one basin. The Panel is unwilling to support continued monitoring efforts.

Response – New Information

In their application, the sponsors requested a grant of \$318,905 to complete the second year of analog placements. The work scope did not include analysis of the second year results, integration of first and second year results, or the preparation of the final project report.

In the 5th grant round, the SRFB approved a grant intended to fund the project through the second year of analog placements. The sponsors noted that due to cost overruns that the SRFB grant and match would only allow completion of the first year of analog placement and analysis of those results.

The USGS has advised the LCFRB that, based on its further review, the 5th round funding will support work on the project through mid-July, well into the second year of analog placement. In addition, the USGS has reworked its schedule and funding requirements for completing the project.

Based on its review, USGS has revised the scope of work and funding needs for the 6th round proposal as follows:

- The scope of work has been expanded to include final analysis and report preparation;
- The funding request has been reduced 56 percent from \$318,905 to \$128,039.

This expansion of scope and substantial cost reduction improves the costs relative to benefits. As mentioned previously, the LCFRB believes that the completed project will provide the technical basis for a cost effective enhancement and expansion of nutrient supplementation efforts.

If the proposal is funded, the LCFRB as the new lead sponsor will closely monitor the project and work with USGS and LCFEG to ensure that work is completed on time and within budget.

The Panel's comments continue to note that there is insufficient information on the study design and technical approach. At the November 18 meeting, we noted that the project application contained considerable on study design and technical approach and asked the Panel for clarification. If questions remain on these matters, we are confident that they can be quickly and adequately resolved.

PROJECT OF CONCERN RESPONSE

Lead Entity: Lower Columbia Fish Recovery Board

Project Sponsor: Lower Columbia Fish Recovery Board

Project Name: Historic Skamokawa Creek Channel Assessment

Project Number: 05-1541 N

SRFB Technical Panel Comments: *The Panel is still not clear how the information on temperature, DO and fish utilization will be used in the feasibility and design phase, rather than simply monitoring for its own sake. This project should remain a POC unless the sponsor is willing to drop these components. The sediment sampling & water level monitoring are appropriate.*

Response

The Sponsor agrees to drop temperature, DO and fish utilization from the SRFB request. The SRFB requested is thereby reduced \$3,000 dollars.

PROJECT OF CONCERN RESPONSE

Lead Entity: Lower Columbia Fish Recovery Board

Project Sponsor: Lower Columbia Fish Recovery Board

Project Name: Gorley Springs Restoration Design

Project Number: 05-1617 N

SRFB Review Panel Comments: *The assessment does not account for the conditions or processes in the watershed, or may be in the wrong sequence with other habitat assessment or restoration activities.*

The application states that the site lies in one of the most dynamic reaches of the Grays River and is a historic and present depositional zone exhibiting a high degree of lateral instability with frequent channel avulsions. Projects in such an area should be expected to have a high degree of “failure.”

If any future work is to be funded at this site the geomorphic analysis that is forthcoming from other parties should be the basis. A better approach to the sequence would to wait for this analysis before proceeding with design.

Response

The LCFRB and project sponsors are fully aware of the dynamic nature of the Grays River channel at the project site. However, it is equally important to recognize the critical nature of this stream reach for recovery of Chinook, steelhead, coho, and especially chum salmon. All 4 populations are rated as Primary by the recovery. The reaches involved are Tier1. The recovery plan singles out the project reaches as a high priority for habitat protection and restoration. Channel, floodplain, channel migration zone and off-channel habitat restoration in the target reaches is the top project priority for the Grays Basin in the 6-Year Habitat Work Schedule. Restoration efforts in this reach are a top priority for the Grays River Habitat Protection District and the local community.

The Grays River chum population is the largest tributary population on the Lower Columbia, and represents one of two genetically distinct populations in the Lower Columbia ESU. The majority (over 80%) of the spawning redds currently occur in the Crazy Johnson reach, along the west edge of the project site. In addition, EDT analysis conducted by WDFW indicates that the project reach is one of the top restoration priorities for chum salmon. Existing analyses and data support the need for implementation of carefully designed projects that protect and enhance chum habitat in the project reach, and are consistent with fluvial processes.

The proposed project was developed to compliment the BPA-funded “Grays River Watershed and Biological Assessment”, being conducted by Pacific Northwest National Laboratories. Objectives of the BPA project include completion of a watershed analysis (geomorphic, hydrologic, and stream channel assessment) of the Grays River Basin, and identification of critical habitat features within chum and fall Chinook salmon spawning

areas. The overall goal of the BPA project is to develop the necessary information to support development and implementation of a prioritized list of actions that protect and restore critical chum and Chinook salmon spawning habitat. The geomorphic assessment component of the BPA study report has already been released, and a review draft of the final report is scheduled to be released in the summer of 2006 (Chris May, pers. comm). The final BPA report will provide general recommendations and prioritization for protection and restoration projects, but will not result in development of site-specific project designs and proposals.

As noted in the SRFB application, the focus of this project is to develop technically and biologically sound restoration project designs that will address both short-term (e.g., LWD/ELJ placement) and long-term (e.g., riparian restoration) habitat needs, consistent with the restoration of natural fluvial processes. Project designs will rely upon, and be consistent with, the information, data and recommendations derived from the BPA study. With regard to sequencing, the anticipated release date of the BPA study and grant award timeline for this SRFB grant cycle will allow integration of study results into the proposed project designs. This will ensure projects properly account for watershed conditions and are designed to minimize risk of failure.

**SRFB 2005 – 6th Round
Review Panel Ratings
Fit of the Project List to the Recovery Plan**

**Lower Columbia Fish Recovery Response
December 13, 2005**

1. Actions and Geographic Areas

SRFB Review Panel Rating: Fair

SRFB Review Panel Rationale:

- *The project list is extensive (21 projects).*
- *Over half the projects on the list are in medium priority areas, and almost half are only in tier 2 reaches or lower.*
- *There appear to be a relatively large number of assessments and it is not clear how assessments are prioritized vs projects.*
- *One of the projects (Doty-Edwards) does not address primary populations.*

LCFRB Response:

As acknowledged by the Review Panel, “the area is large and diverse, with many listed species.” The area encompasses 17 major subbasins, over 1,800 anadromous river miles, and 5 listed species comprised of 70 separate populations. Project priorities for the region are based on the regional recovery plan. Unlike most lead entity lists, the project list covers the entire recovery region setting priorities within and across all watersheds and salmon populations in the region. Developing a regional list is a complex task. In many respects, it could be compared to developing a single list integrating and ranking all project proposals for all lead entities in Puget Sound.

In setting priorities, the Recovery Plan works down from broad regional goals and objectives to reach specific priorities. It must take into account that our knowledge of fish characteristics and needs, watershed and habitat conditions vary across the region. The Plan sets recovery goals based on the TRT Viable Salmonid Population criteria. In setting priorities, the Plan and the 6-Year Habitat Strategy consider and integrate:

- Recovery Goals;
- The characteristics and status of each population;
- Areas of fish utilization (4,000+ reaches); and
- Current and potential habitat conditions.

Our approach and resulting regional project list goes well beyond the project lists developed by any other lead entity with the exception of the Snake lead

entity. The regional list looks at priorities in the individual watersheds, but then looks across watersheds to see how the projects will contribute to regional goals. Although, other project lists may be based on habitat priorities for a watershed in a recovery plan, they are not integrated across the region. Comparing and rating the regional list in the same context as lists covering only a portion of a recovery region would be comparing apples and oranges. The lower Columbia regional project list must be viewed in the overall context of the Recovery Plan.

In this context, we offer the following relative to the Panel's review criteria.

- *Does the project list address highest priority actions?*

Seventeen of the 21 projects on the Lower Columbia list address "high" project priorities in the 6-Year Habitat Schedule.

- *Does the project list address highest priority areas?*

Seventeen of 21 projects target Tier 1 and 2 reaches. Tier 1 and 2 reaches are the high priority reach designations for Primary and Contributing populations and account for about a third of the reaches in the region. It is inappropriate to categorize a Tier 2 reach as one of medium importance. Three projects target Tier 3 or 4 reaches. Based on population priorities and key life history needs, implementation of these 3 projects will result in significant benefits to the target species and upgrading of tier rankings.

- *Does the project list benefit the highest priority stocks, limiting watershed processes and habitat features?*

Twenty of the 21 projects address Primary populations. However, it should also be noted that they also often benefit Contributing populations. In developing priorities, the Recovery Plan and 6-Year Habitat Work Schedule assess population priorities, site reach potential, key life history stages, and associated limiting factors. This combination of factors is used to set priorities. Looking simply at highest rated limiting factors and habitat features would not necessarily result in the same priorities.

Finally, while Primary populations are those that must reach the highest level of viability. Contributing populations must be improved substantially and Stabilizing populations cannot be allowed to deteriorate in order to satisfy the TRT recovery criteria. While they may be a lower priority when compared to a Primary population the Recovery Plan requires that they be addressed. As the Review Panel notes, the Doty-Edwards project addresses only Contributing population, but given

the extensive restoration efforts in Cedar to date and the potential contribution of Cedar Creek to achieving the needed viability improvements to two Contributing populations, the project was rated as having a medium benefit to fish and was ranked accordingly.

PROJECT OF CONCERN RESPONSE

Lead Entity: Lower Columbia Fish Recovery Board
Project Sponsor: Lewis County Conservation District
Project Name: Cispus River Riparian Restoration
Project Number: 05-1596

SRFB Review Panel Comments: *Episodic disturbances like the one that occurred in 1996 in the upper Cowlitz basin are expected events that will occur again. Over time these events create highly productive habitat for many species of fish and wildlife. The relatively broad alluvial valley of the Cispus River is coupled closely with steep headwater channel networks that periodically can deliver high volumes of sediment to downstream reaches. Ample seed sources of native hardwood species are present to successfully colonize gravel bar tops dating to the flood and will naturally regenerate riparian forests.*

The proponent has not demonstrated why this particular reach is critical to salmon recovery and a priority for wood placement. It is a braided reach with a wide channel migration zone and intact natural processes. This appears to be more of a road protection project than a habitat restoration project.

Response

Project Purpose and Goal:

- The purpose of this project is to provide instream structure and pools that are largely lacking in the target reach and to speed the restoration of riparian vegetation needed to create channel migration patterns that will maintain and enhance spawning habitat for critical spring Chinook. Radio telemetry data reveals extensive use of the existing structures by spring Chinook. While we agree that given sufficient time habitat conditions will improve through natural process. However, given the critical need to rebuild the upper Cowlitz spring Chinook population, we believe that the proposed intervention is reasonable and prudent. The project will work with natural processes to speed recovery of this reach. While we acknowledge that the proposed enhancement of the existing LWD structures would likely provide erosion control that would benefit the adjacent road, the project is intended to meet a priority fish need.

Importance of Stream Reach to Salmon Recovery:

- To meet established recovery goals, the Upper Cowlitz and Cispus spring Chinook populations must be recovered to “High⁺ recovery status (LCFRB, 2004).
- Multiple year monitoring and site-specific field surveys were conducted on the Cispus (San Dimas 2003, Lewis PUD 2001) to quantify habitat and fish abundance.

Monitoring results identified the Cispus project area as valuable biological hot spot for Chinook, Coho, and Steelhead production. (Mike Kohn, Lewis PUD).

- Over 90% of the mainstem Cispus spawning occurs above Greenhorn Creek and below the confluence with the North Fork (GPNF & Mike Kohn). The project reach is located within this area of high spawning abundance.
- Discussions with WDFW staff indicate that, based on previous EDT analyses, the project reach has been mischaracterized as a “Tier 2” reach. The consensus of local WDFW biologists ” (Dan Rawding, WDFW, personal communication) and LCFRB staff is that project reach qualifies as “Tier 1” for spring Chinook.

Importance of Stream Reach for LWD Placement:

- LWD tends to be transient in this reach, and counts fall below regional standards (80 pieces/mi). Analog reaches have approximately three times the instream wood counts compared to the project reach. The loss of LWD has contributed to the loss of habitat diversity and channel stability in this stream reach (USFS, 1995).
- This project will result in placement of 30 log structures within the project reach, substantially increasing LWD levels.

PROJECT OF CONCERN RESPONSE

Lead Entity: Lower Columbia Fish Recovery Board

Project Sponsor: Lower Columbia Fish Recovery Board

Project Name: North Fork Toutle River Fish Passage

Project Number: 05-1432 N

SRFB Review Panel Comment: *Given the extreme slope and length of the spillway, the Panel questions whether the results of this study could lead to the implementation of high priority habitat restoration projects.*

Response:

- The spillway is a 2,200-foot long, 400-foot wide, unlined, rough-bed channel with a 7% gradient.
- The spillway was designed for the possibility of upstream natural passage (USACE, August 1999).
- The overall spillway gradient is within the slope parameters for successful establishment of fish passage through use of roughened channels.
- At least one vertical slope and height barrier exists near the toe of the spillway (Wolf Dammers, WDFW, personal communication), and the study design will help identify other passage impediments within the spillway.
- The study design is consistent with approaches used by WDFW, Hydroelectric companies, and other agencies to identify passage problems and solutions associated with dams within the Columbia River watershed (e.g., upper Cowlitz, Columbia River mainstem dams, etc).
- Results of the study will determine whether the spillway can be modified to provide volitional fish passage, and will provide recommendations for structural modifications.

SRFB Review Panel Comment: *The project addresses information needs important to understanding the watershed, but does not seem relevant to project development or sequencing, and it is unclear how it would lead to SRFB projects.*

Response:

- Toutle River coho and winter steelhead are identified as “primary” populations for fish recovery on the Lower Columbia River.

- Over 50 lineal miles of anadromous fish habitat exist above the SRS, but are currently not fully accessible because of passage limitations at the SRS and chronic problems with the FCF.
- The SRS is currently a barrier to upstream passage, and restoration of passage is specifically identified as the top priority habitat action for the Toutle River in the LCFRB's Recovery plan.
- The study design will provide information on:
 - Trapping efficiency of the FCF, and fish behavior and survival in relation to the trap facility; and
 - Whether the spillway is currently passable, and if not, which sections and physical/hydrological conditions pose passage problems.
- Based on the telemetry studies, engineering analyses will be conducted to determine:
 - The feasibility of modifying the FCF to improve its collection efficiency and survival of trapped fish; and/or
 - Retrofitting the SRS spillway to enable consistent and safe upstream passage.
- Restoration of fish passage at the SRS, either through modifications to the FCF or through establishment of volitional passage through the spillway, is the necessary and logical **first step** in sequencing recovery actions.
- Until fish passage is restored, investment in habitat restoration actions upstream of the SRS would neither be prudent nor cost-effective.

NOPLE Comments to DRAFT LE Report:

Strategy Quality. Last year, our Strategy ranked as follows for Specificity and Focus:

Species: Good

Habitat/Process: Good

Actions/Areas: Excellent

Community: Good

NOPLE used the comments from last year's Review Panel to make improvements in all areas, yet somehow, our Strategy scored lower this year. This makes no sense.

Project list. We disagree with the scoring of our project list as "fair". This low scoring is accompanied by the comment that "all projects are in WRIA 19, not addressing highest priorities in the overall strategy." In fact, all the projects on our list are in either tier 1 or tier 2 watersheds, which do therefore address the highest priorities in the overall strategy. The real reason for the low scoring seems to be that the projects are located in WRIA 19, which the review panel appears to be prioritizing below our other WRIs, without any reasoning provided.

Ranking of Projects. We disagree with the scoring of our project ranking as "good/fair". This low scoring is accompanied by the comment that "scoring criteria appear to drive the order of the projects on the list, rather than the strategy." Our scoring and ranking criteria do favor projects in tier 1 watersheds over projects in tier 2 watershed, but also consider important additional criteria which were explained in detail in the deliverables due on September 30 and during the presentation to the Review Panel in November. In this particular list, these additional considerations were so significant that all NOPLE committees (technical, policy, and citizen) proposed the same rank order. In fact, these additional considerations have all been identified by either the legislature, the SRFB, or IAC as priorities. For instance, the SRFB has identified the IMW program as a priority monitoring program. The Legislature, in the Salmon Recovery Act at RCW 77.85.130(2)(b), has identified the amount of match or in-kind funding as a priority that the SRFB MUST consider. Finally, the IAC, in its 6th Round Policies and Project Selection Grants Manual at Appendix C has identified the exact criteria which our lead entity uses to evaluate the relative benefits to salmon and certainty of success of each project. It makes no sense that we are faulted for considering criteria in our ranking process that the SRFB, the legislature, and IAC themselves have identified as priorities.

Selinda Barkhuis, Salmon Habitat Recovery Coordinator
North Olympic Peninsula Lead Entity (NOPLE)
223 E. 4th Street, Suite 5
Port Angeles, WA 98362-3015
phone direct 360-417-2430
sbarkhuis@co.clallam.wa.us
<http://www.noplegroup.org>

-----Original Message-----

From: Barkhuis, Selinda [mailto:SBarkhuis@co.clallam.wa.us]

Sent: Wednesday, December 14, 2005 11:57 AM

To: 'rollieg@iac.wa.gov'; 'Galuska, Tara'

Subject: Comment to DRAFT LE report

Importance: High

Comment to DRAFT LE Report:

Strategy Quality. Last year, our Strategy ranked as follows for Specificity and Focus:

Species: Good

Habitat/Process: Good

Actions/Areas: Excellent

Community: Good

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State of Washington
Department of Fish and Wildlife

Mailing Address: P.O. Box 753, Omak, WA 98841, 509-826-3123
Regional Office Location: 1550 Alder St NW, Ephrata, WA 98823 509-754-4624

13 December 2005

Okanogan County Planning & Development
Natural Resources Division
ATTN: Nick Christoph
123 5th Ave North, Suite 130
Okanogan, WA 98840

SUBJECT: MVID East & West Irrigation Diversions - Fish Passage
Enhancements. Project numbers: 05-1632 R and 05-1624 R

Dear Mr Christoph:

The Washington Department of Fish & Wildlife (WDFW) supports the funding and implementation of the above-listed projects. The proposed projects will provide improved fish passage as well as the restoration of the morphological functions of the rivers by removing structures that present barriers to both upstream and downstream migration and sediment transport.

The projects were formally identified in the Washington Conservation Commission's *Salmon, Steelhead and Bull Trout Habitat Limiting Factors* report, published in July, 2000. The current proposals have been developed over the last several years, through a collaborative process created by the Bureau of Reclamation (Reclamation) to ensure that all the participating parties and regulating agencies have an opportunity to comment on the project concepts, validity and design. Quarterly meetings provide a forum for input, and projects evolve through consensus-based discussions. The projects have been well reviewed and vetted by representatives from local, state and federal agencies. The process also includes and addresses the concerns of other interested parties, such as adjacent landowners and special interest groups. As such, the projects not only have the support of the Lead Entity's Citizens Advisory Group, which represents the populace of Okanogan County, but the implied consent and support of the attendees of Reclamation's quarterly meetings.

The Methow Valley Irrigation District (MVID) has recently shown good faith in their attempts to ameliorate the barriers presented by their diversion structures. Changes in District management, together with a heightened awareness and concern of the issues of fish passage, have resulted in their willingness to collaborate with both state and federal agencies. Currently perpetual permits, grandfathered under agriculture statutes, allow MVID the continued use of heavy equipment in the river to create barrier dams to

provide the necessary water surface elevations for their delivery systems. Despite these permits, MVID has been working with local agency staff to find innovative, alternative solutions to their standard operating procedures. MVID has shown initiative in their willingness to attempt new approaches and contribute the cost of these untried methods.

The proposed projects are part of the larger picture that includes the reduction of diversion rates, compliant screens, removal of passage barriers and the improved efficiency of the delivery system. All of these elements will contribute to the improved health of the river and the salmonid populations that utilize them, but they all take time, manpower and money. Continued improvements of their delivery system will over time, improve in-river conditions and studies are underway to determine the best methods to achieve that goal. At the present time, there are willing partners to complete the step of removing the passage barriers and the opportunity to implement these projects should be undertaken and funded.

We hope that the Salmon Recovery Board will agree that these projects will provide year-round unimpeded passage for both juvenile and adult salmonids, as well as other species of fishes, amphibians and macroinvertebrates that utilize the Methow Watershed. The proposed projects designs have had, and continue to have the oversight and input of WDFW Engineering and Habitat staff, as well as staff from NOAA Fisheries, USFWS, and BPA. We feel that efforts of everyone that has contributed to these projects to date, including members of the MVID are working toward projects that will facilitate the restoration and enhancement of salmonids in the Methow basin.

Thank you for the opportunity to provide you these comments. If you have any questions, please don't hesitate to contact me at 509-826-3123.

Sincerely,



Constance Iten
Area Habitat Biologist

cc: Bruce Heiner, WDFW, Pullman
Mark Cookson, WDFW, Omak
Bob Jateff, WDFW, Omak
Chris Parsons, WDFW, Ephrata

Responses to Technical Review Comments

MVID East Diversion Project Number 05-1632R

Comment #1: “The project would move instream flow from the main channel to a 1500 foot engineered, rip rapped low quality channel in a location with limited potential for natural channel function. The point of diversion would be moved upstream this distance.”

Currently the instream flow is deflected by a channel spanning dam over which the only low flow passage is provided by an approximately 5’ wide deteriorating DeNile fishway located on the extreme right bank of the river far from its thalweg. This comment argues that completely removing this dam and artificial fishway, eliminating the annual use of a D-8 tractor in the stream (authorized in perpetuity by the WDFW), and restoring natural processes to an artificially blocked side channel does not improve this situation.



Figure 1: Existing Current Condition



Figure 2: Existing Current condition-pushup dam constructed annually across West Side Channel

Oversight on design criteria and intake canal habitat quality are being provided through a series of consultations with county, state, federal and tribal representatives at quarterly coordination meetings sponsored by Reclamation. As a result, the proposed design is not for a “low-quality” channel but for a reconstruction of an existing channel that was abandoned after the 1948 flood. Currently, the design only calls for rip-rap on the river side of the canal bank. The substrate and thus the habitat available in the canal itself will be determined as on other projects at the quarterly coordination meetings with biological input and agreement from the regulating agencies.

Figure 3 below shows the entrance to the proposed upstream extension of the existing canal and illustrates that much of the original channel remains intact. The flow during an extremely dry year in the Methow on this date (10/12/05) was 230 c.f.s. The flow at the tripod in the figure was 11c.f.s. (coincidentally the new permissible diversion rate for the MVID East diversion). This photo shows that the percentage of low flows diverted from the mainstem Methow into the channel even during dry years would not have a measurable effect on river stage in the bypass reach and hence, no discernable effect on wetted area. If, as intended, the new side channel is constructed to provide suitable salmonid habitat, there is a net increase in wetted area as a result of this project. This is especially true when the pushup dam blocking the West side channel is permanently removed and the East side channel is restored to natural function.



Figure 3: Entrance to proposed channel

Figure 4 shows that a high stream bank constrains the river on its left bank. This bank is topped by an airport. The river right bank is constrained by a rip rap levee protecting existing homes and farms. As can be seen from the photograph, the river presently has only about 100' to move laterally and there is little if any hope that the anthropogenic impediments to natural channel function immediately upstream of the present dam will ever be removed. Not removing this structure will maintain this *status quo*. However, implementing this project will actually increase natural channel function in this reach by permanently re-opening the West side channel downstream of the new diversion.



Beginning
of river
right riprap

Figure 4: View of High Bank constraining river left bank

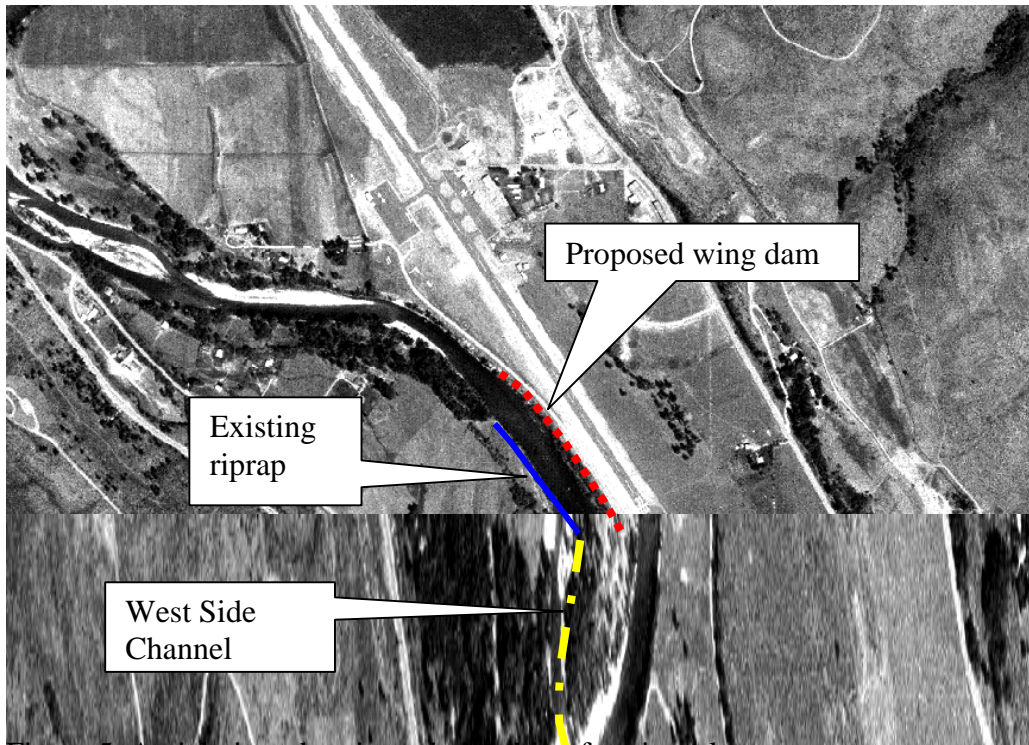


Figure 5 Aerial view showing relationship of project elements.

The proposed relocation of the diversion point upstream allows the stream gradient to provide the elevation needed to efficiently divert the permitted water right yet minimizes impact to the stream geomorphology. By locating the diversion parallel to the flow the potential for catastrophic failure or impacts to passage are eliminated. Moving the diversion upstream above the entrance to the West side channel allows restoration of natural function to this valuable habitat feature. (Please see Figure 6)



Figure 6: Dewatered West side channel
(Water visible is leakage through pushup dam blocking head of channel)

Comment #2: “Efforts to reduce the instantaneous diversion should be implemented. The applicant stated that a comprehensive study is underway. This three year planning process should be completed prior to making infrastructural changes at the diversion dam.”

Voluntary efforts by MVID to reduce instantaneous diversions are underway even though their present allowable diversion rates are, in the opinion of Ecology and the PCHB, consistent with accepted irrigation practices in the Methow and Eastern Washington and compliant with Ecology regulations.

In 2000, MVID, in conjunction with BPA and the Yakama Nation, engaged an agriculture engineering consulting firm, IRZ , to design a combination of canal lining, piping, and reshaping to increase efficiencies and lower operations and maintenance costs. The resulting IRZ plan was adopted by the MVID Board of Directors in 2001 as their preferred canal renovation alternative. The design was reviewed and cost estimates were recently updated by the Boise Regional Office of Reclamation. Thus an engineered plan to improve canal infrastructure is already in place. The comprehensive study referenced above in the comments will address the issues of efficient management of operational spills, water deliveries, and on-farm applications to provide even greater efficiencies above those obtained by implementing the IRZ design. It will not address the issue of maintaining diversions at the MVID East site but rather assumes they will continue. Delaying diversion renovation will only increase the duration of the present situation of restricted passage, annual equipment entry into the stream, and an artificially blocked natural side channel.

Although voluntary irrigation efficiencies may subsequently reduce the amount of water diverted, the proposed structure would continue to function with little impact to the river and provide passage during the years any study is underway.

Comment #3: “This appears to be an irrigation infrastructure improvement project with limited benefits to salmonids.”

The Washington Conservation Commission’s Limiting Factors Report for the Methow Subbasin, Subbasin Plan, the US Forest Services’ Middle Methow Watershed Assessment all specifically identify the MVID East Diversion as a contributing factor to habitat degradation in the Methow Subbasin. The professionals who prepared these documents all agreed that eliminating restricted passage, annual equipment entry into the stream, and an artificially blocked natural side channel on one of the most productive rivers in the Columbia Cascade Province provides more than limited benefits to salmonids. With actions such as this application, MVID has demonstrated that they would prefer not to continue these practices but they also have permits in hand that allow them to continue these practices indefinitely.

Responses to Technical Review Comments

MVID West Diversion Project Number 05-1624R

Comment #1: "This project provides limited benefits to salmonids. Physical improvements at the diversion will have negligible passage benefits during the critical migration period for Chinook. Base flow below the diversion can be so low that fish have a difficult time getting upstream to the diversion, thus this project would have negligible fish passage benefits."

The Chain of Lakes side channel project is currently at the proposal stage, is currently at the proposal stage, so any benefits associated with that project are uncertain."

Response: Nearly all of the spring Chinook that migrate up the Twisp River spawn upstream of the MVID west diversion (pers. comm., Michael Humling, Fish and Wildlife Biologist, Washington Dept. of Fish and Wildlife). Most of these fish pass the diversion before base flows are typically reached in mid-August, but in low flow years such as 2005 the push-up dam may be constructed earlier in the migration period for spring Chinook if low flows (100 cfs or less) occur before mid-August. Therefore removing the necessity of an annually constructed low flow barrier to fish passage below critical spawning habitat, especially in low flow years, provides obvious benefits to salmonids. In past low flow years the river below the diversion may have been dewatered to the point where fish passage to the diversion was not possible, but with the reduction of the diversion from 20 to 30 cfs to 11 cfs this event should not occur as often, if at all. It is worthy of note that in the extremely low flow years of 2003 and 2005, redds occurred upstream of the diversion. If the stream below the diversion was impassible, this would nor have occurred. Figure 1, taken during extreme low flows in 2003 shows sufficient passage flows below the diversion even though at the time the diversion rate was near 30 c.f.s. as opposed to the new diversion rate of 11 c.f.s. Personnel from the WDFW confirmed that sufficient passage flows existed as part of their determination that no enforcement actions were necessary even though river flows at Twisp were at record lows 15-20 cfs).



Figure 1: Twisp River at the diversion 9/12/03. (USGS gage at Twisp recorded 18 c.f.s.)

The importance of the Twisp River for Upper Columbia salmonid species has been noted in numerous studies and assessments. According to the Pacific Watershed Institute's (PWI) Twisp River Watershed Assessment: "the Twisp River supports 20-30% of the endangered spring Chinook population in the Methow. It also supports endangered summer Steelhead, cutthroat trout, and is a stronghold for bull trout. The Methow Valley community, Methow Limiting Factors Analysis (Andonaegui 2000, UCRRT 2001) identified the Twisp River watershed as a high priority area," and the PWI assessment lists several reasons for prioritizing restoration work in this watershed. The PWI assessment contends that recovery goals for the Twisp River: "are consistent with policies and guidelines of the Governor's Salmon Recovery Office and Joint Natural Resources Cabinet (Joint Natural Resources Cabinet 2001). The Twisp watershed is considered a Category 2 watershed by the Upper Columbia Regional Technical Team (UCRTT 2001). The most important difference between Category 1 and Category 2 is an increased level of fragmentation that has resulted from habitat disturbance or loss. Subwatersheds connectivity may still exist or it can be restored with the primary purpose of recovering salmon life history patterns and dispersal. Restoring ecosystem functions and connectivity within these watersheds are priorities."

The Methow Limiting Factors Analysis study ranks restoration of fish passage and barrier removal as the number 2 priority of the Technical Advisory Group (TAG) for recovery of salmonid populations (p. 12), and in particular restoration of habitat function in the lower 15 miles of the Twisp River is ranked as the TAG's number 3 priority (p. 13). On page 124 of the Limiting Factors Analysis, the report states that: "the MVID west canal diversion can result in complete blockage of the stream channel in low flow water years as a result of the use of "push-up" diversion dams to divert flow into the canal (D. Bambrick, NFMS, pers. comm., 2000)."

The PWI Twisp River Watershed Assessment recommends on page 12 to: “Improve/maintain passage conditions below the MVID West diversion through instream modifications or place some diversion water into water trust.” Since the PWI assessment was conducted the MVID water diversion has been significantly reduced. The proposed project seeks to implement the instream modifications to the diversion as the PWI assessment recommends.

The final Methow Subbasin Plan prepared for the Northwest Power and Conservation Council (November, 2004) identifies the MVID west diversion as an obstruction to fish passage. In the “Habitat Conditions and Limiting Factors to Fish Production” section, the plan (page 179) lists under the heading “Anthropogenic Effects” the construction of artificial barriers to fish passage, such as push up dams, diversions, etc. On page 180 the plan states that: “Some irrigation diversion structures are reconstituted annually with a bulldozer as push-up berms and not only affect passage, but also significantly degrade the stream channel.”

The Management Plan section of the Methow Subbasin Plan is stated to be “a culmination of extraordinary efforts by the subbasin planners, the public and stakeholder input” that was developed “as a laborious result of carrying out the assessment and inventory work and formation of the vision, goals and principles sections of the subbasin plan.” This section of the subbasin plan identifies restoration strategies by Assessment Unit (AU). The lower Twisp River is identified as AU M8. Under the heading Factors Limiting Production (Priority from EDT Analysis), the table on page 330 specifically identifies the MVID West Canal Diversion as an obstruction to fish passage. The MVID west diversion is also listed in the Obstruction Form Workbook Appendix of the plan.

Comment #2: “The Pollution Control Hearings Board ordered a reduction in the instantaneous diversion from 25 to 11 cfs. A water source solution should be based on comprehensive planning for the entire irrigation system. Installing permanent grade controls in the river channel may not be appropriate in view of potential system-wide solutions to MVID delivery.”

The current design and the new fish screens installed in 2004 will accommodate diversions of 11 c.f.s.

In 2002, MVID, in conjunction with BPA and the Yakama Nation, engaged an agriculture engineering consulting firm, IRZ, to design a combination of canal lining, piping, and reshaping to increase efficiencies and lower operations and maintenance costs. The resulting IRZ plan was adopted by the MVID Board of Directors in 2001 as their preferred canal renovation alternative. The design was reviewed and cost estimates were recently updated by the Boise Regional Office of Reclamation. Thus an engineered plan to improve canal infrastructure is already in place. In 2005, the Washington State Legislature appropriated \$1.3 million for canal improvements on the West Canal. This money will be expended in 2006 through an agreement between Ecology, Reclamation, and MVID using the IRZ design as a starting point. There is no provision attached to these funds that dictates the West Diversion must be abandoned and MVID has expressed

its intention to continue to use its authorized surface diversion from the Twisp River indefinitely. Thus, planning for expending the Legislature's grant will not address the issue of maintaining diversions at the MVID West site but rather assumes they will continue. MVID's experience operating the West Canal at lower diversion rates this season demonstrated that, with the contemplated efficiency improvements using the appropriated funds, they will be able to satisfy irrigation delivery calls for water from the renovated canal.

Comment #3: "The panel recognizes the benefits of keeping heavy equipment out of the river channel and better control of the amount of water diverted into the side channel upstream of the fish screen. However, a comprehensive instream flow plan for the entire lower Twisp watershed should be completed prior to specific project development."

In 1976, base flows were established for the Methow Subbasin by WA173-548. This is the only comprehensive instream flow plan currently authorized under State law. In 2004, The WRIA 48 Methow Watershed Planning Unit reviewed the instream flows established under this regulation and found them adequate. Even if funding were available for developing a comprehensive instream flow plan for the Lower Twisp River, there is no mechanism under State law to enforce its provisions because of the established water rights of the various irrigation diversions.

In the past, NOAA Fisheries and the USFWS have taken action to have the Forest Service establish "target flows" in the Methow Subbasin as a result of the consultations required under Section 7 of the ESA for Federally permitted diversions originating on Forest Service lands. None of the diversions in the Lower Twisp fall into this category and any ESA related-actions would take place under Section 9 of the ESA. To date, neither agency has shown an inclination to pursue this course even during recent extreme low flows. Thus, while establishing a comprehensive instream flow plan for the Lower Twisp could be a laudable goal, there is neither funding currently available nor a regulatory framework in place to make it binding upon irrigators in the foreseeable future. Delaying diversion renovation will only indefinitely increase the duration of the present situation of restricted passage and annual equipment entry into the stream by preserving the *status quo*.

BACKGROUND INFORMATION FOR THE OMAK CREEK CULVERT REPLACEMENT PROJECT

The objective of the Omak Creek culvert replacement project is directed to minimize the affects of a factor limiting salmonid production, the amount of fine sediment, in this key watershed.

In addition to physical barriers and elevated water temperatures, accelerated sediment yield was another factor limiting salmonid production within the Omak Creek watershed (NRCS 1995). Roads were identified as a significant source of fine sediment ($< \frac{1}{4}$ " dia.) and contributed to embeddedness within the Omak Creek basin waterways. During 2004 a comprehensive road inventory was conducted in the Omak Creek watershed. This assessment indicated road density in was 4.77 miles/sq. mile. Road densities of 4.0 miles/square mile have been found to produce sediment more than four times the natural erosion rate (Cederholm 1981).

In 2000 and 2005 the volume of fine sediment was measured in selected pools (V star) within two reaches of Omak Creek. These surveys indicated the proportion of fine sediment in pools are at extreme levels (0.43 in 2000 and 0.74 in 2005). In an effort to diminish the amount of fine sediment delivered to defined waterways within this watershed, over 50 miles of road have been decommissioned (road bed ripped to a depth of 18", construction of water bars and culverts removed) and 3 undersized culverts have been replaced in the past 5 years.

In an ongoing effort to reduce the amount of fine sediment delivered to Omak Creek, this project, would replace an undersized culvert at RM 15. The result of this project would reduce the risk of an estimated 50 cubic yards of road fill from being deposited in downstream reaches and consequently prevent degradation of quality of spawning habitat and instream productivity (Figure 1).



Figure 1. Looking downstream at 6 ft. diameter culvert on Omak Creek. Deposition area in foreground indicating undersized culvert. Bankful width measured 14 feet upstream of the influence of the road prism.

In an effort to extend the range of steelhead in Omak Creek, three instream structures were installed at the base of Mission Falls (Figure 2). The purpose of these structures was to provide adequate depth downstream of a vertical drop that was an observed impediment to fish passage. The results of these structures are expected to extend the range of adult steelhead in Omak Creek to RM 22.



Figure 2. Three in-stream structures at the base of Mission Falls installed during October 2005. Expected to increase range of steelhead in Omak Creek.

Questions and responses to concerns:

It is unclear what problem to salmonids the project is addressing, there is a low potential threat if the project is not completed and it is unclear how the project will achieve its stated benefit.

This project would prevent an estimated 50 cubic yards of fine sediment (road fill) from being delivered and deposited on spawning substrate in Omak Creek. During 1997 and 1998, spring runoff discharge was constricted at the upstream end of this culvert, elevating the waterline to within 5 feet from the top of the road bed. If there is an above average snow pack or a unique weather event (concentrated thunderstorm, rain-on-snow), the likelihood of this culvert becoming plugged and overtopped is high.

The replacement of the currently undersized-culvert would reduce the risk of this culvert from being plugged, overtopped and the adjacent road fill from washing out. This culvert is one of four undersized-culverts on the mainstem of Omak Creek, two of which will be replaced during 2006 through BPA funding. Due to permit requirements and construction window (August through October) it was estimated only 3 of the 4 culverts

could be completed during 2006. The fourth culvert and furthest upstream is expected to be replaced during 2007.

| |
|---|
| This culvert is approximately ten miles upstream of steelhead spawning habitat, and therefore appears to have a low potential for sediment delivery if the culvert fails. |
|---|

Fish passage through the Mission Falls gorge was first improved in 1999 by removing approximately 28,000 cubic yards of material (large boulders) deposited during the construction of a narrow gauge railroad. This allowed limited passage by adult steelhead verified by observations of adult steelhead and evidence of a redd upstream of the gorge. However, based upon observations of adult steelhead attempting to navigate over a vertical drop near the base of the gorge, there was an effort to compromise this impediment. During the October 2005, 3 instream structures were installed to inundate this drop, improve passage conditions through the gorge and allow access to the upper 20 miles of Omak Creek. Therefore, the replacement of this undersized culvert as well as the remaining three are timely.

From: middlepalix@mindspring.com

Sent: Monday, December 12, 2005 3:24 PM

To: Brian Abbott

Subject: Round 6 SRFB Proposal: Willapa River Acquisition/Restoration

Hi Brian. As I told you on the phone today, the Sportsmen's National Land Trust will incorporate the three Technical Rater Concerns identified in #2 of the Project Comment form.

This would keep restoration actions within 250 feet of the Willapa River channel (reduce riparian planting to 250 feet from the channel. Also, it appears that the raters might allow LWD placement in Robinson Creek in the first 250 feet...but this may be an oversight...if this is so, please let use know). We would also drop the SRFB grant proposal to place LWD in Robinson Creek except if allowed to place LWD in the first 250 feet (as suggested we can still do restoration actions (which were LWD and riparian planting) within 250 feet of the Willapa.

We note that the concerns expressed by the tech raters are of great concern to us as they do conflict with State paid for/sponsored technical guidance on riparian zones and restoration methods (including incised channels). We do our very best to bring forward a project that is technically substantiated...and are at a loss at the apparent chasm between what we proposed to implement versus the technical rater feedback.

We also will do all we can within the existing proposal and funding request to design, permit, and install one complex LWD jam..although I am concerned that the technical raters have underestimated the price tag of such an action that would result in a meaningful benefit to fish. We are also concerned with the tech raters feedback here, as no where in the Pac. Co. Salmon Strategy does it state that ELJs are the main limiting factor on the Willapa...rather...just LWD...with no preference of method for delivering it to the river (whether riparian, single piece, jams, etc.). As pointed out...the WRIA 24 plan is in significant conflict in multiple areas...evidenced by the fact that they say they support projects that address the causes of degradation (for lack of in-channel LWD that would be the lack of riparian zones on the Willapa) over symptomatic restoration treatments (placement of LWD). But we won't forward these points further for the Round 6 proposal.

Thus, we respectfully ask for the SRFB to consider immediately removing our Project of Concern tag from our Round 6 project. Please inform me of the SRFB's decision at your earliest opportunity.

Many thanks

Tom Gibbons

Vice President

Sportsmen's National Land Trust

From: John Sims [jsims@centurytel.net]

Sent: Tuesday, December 13, 2005 6:53 PM

To: heatherb@iac.wa.gov

Cc: 'Geppert, Rollie'; Rich McConnell; Anne Shaffer; Bruce Jones; Carl Chastain; Clyde Dietz; Clyde Dietz (home); Dave King; debbie_leavitt@fws.gov; Eric Carlsen; Greg Masten; JeanC5@aol.com; Jesse Cardenas; Larry Gilbertson; Mark Mobbs; Mike Stamon; Pat Crain; 'Carri Gaines'; 'Bill Armstrong'; 'Bill Conway'

Subject: Response to Review Panel's comments

It has been confusing to determine what is required. We have no comment on the RP's draft comments to our project list, but do have a comment about the remarks on our strategy, to wit: Item 6, Certainty. This Lead Entity does not have the analytical resources to generate any certainty modeling. This was made clear when the coastal lead entities met with Neil Aaland on June 7th to discuss how the RP could approach lead entities not affiliated with, or under, a regional recovery plan. At that time, we were unanimous that we did not have the resources to perform any modeling in support of certainty determinations, unless additional funding were provided to LE operational funds. It was our impression at that time that that premise was accepted, and future reference to this requirement would be dropped. There was no further reference to it at subsequent RP sessions. It is also possible that the "failure" to perform any modeling may be a minor factor in the adjectival rating "Poor" that we received. It is impossible for us to ascertain what weight was given this particular comment and the other comment found in Item 6. Therefore, we make no rebuttal.

John



San Juan County (WRIA 2) Lead Entity San Juan County Marine Resources Committee

PO Box 947

Friday Harbor, WA 98250

Email: brosenkotter@sjccmrc.org

December 20, 2005

Mr. William Ruckelshaus, Chair
Salmon Recovery Funding Board
P.O. Box 40917
Olympia, WA 98504-0917

RE: Support for San Juan County Round 6 Proposals - Assessment and Protection of Kelp, Genetic Stock Identification of Juvenile Salmon, Salmon Habitat Protection Blueprint, and Thatcher Bay Projects

Dear Mr. Ruckelshaus and Members of the Salmon Recovery Funding Board:

The Lead Entity for salmon recovery efforts in San Juan County (WRIA2) strongly supports all four projects submitted for Round 6 funding and is confident that the results of these projects will substantially enhance salmon recovery efforts in San Juan County and ultimately for the region.

The San Juan County Salmon Recovery Plan is a chapter in the overall Puget Sound Shared Strategy. Our local strategy has been reviewed by the nearshore team and Technical Recovery Team (TRT), and their feedback has been incorporated in the final plan submitted in June to NOAA.

The San Juan archipelago is a source of energy and a temporary haven for many fish en route to and from other portions of the Puget Sound and other regions. San Juan County waters and nearshore habitats are essential parts of the picture for salmon recovery in Puget Sound. Multiple species of salmon from watersheds across the region use the islands during their juvenile and adult life stages, utilizing a complex array of habitats. Many populations of Chinook move through the islands during migration and rearing. All 22 populations of Puget Sound Chinook salmon occupy the San Juan Islands nearshore ecosystem at some point in their life cycles. Additionally, with the recent listing of the local resident orcas, salmon recovery will also be critical for the whales' recovery as Chinook salmon are primary prey species for the local killer whales.

The projects submitted to the Salmon Recovery Funding Board for this round all fulfill critical roles in providing information and enhancing protection of our marine resources. With San Juan County's extensive marine shoreline, accurate information on marine resources is a key component in the planning efforts for San Juan County. Due to the over four hundred miles of relatively pristine and intact nearshore habitat, the primary salmon recovery goal for San Juan County is protection. However, with one of the highest current and projected growth rates in the state, incremental development and associated population growth are primary threats to the local nearshore habitat and salmon recovery. The local strategy, which is based on increased protection through improved information, is designed to directly address these primary threats.

The San Juan County Marine Resources Committee (MRC) is the designated local Citizens Advisory Group under the Washington Salmon Recovery Act and is dedicated to the protection and restoration of the marine environment in the San Juan Islands. MRC members, selected by the Board of County Commissioners, represent local government, tribal government, the scientific, economic, recreational and conservation communities, and citizens at large. This system utilizes local knowledge, emphasizes education and generates support from local marine users and landowners whose activities impact the waters of Puget Sound. The MRC has an extensive history of success and will celebrate its 10th year in January. The respect and success of the San Juan County MRC is substantiated by other groups nationally and internationally copying the model created in San Juan County, and ultimately in the formation of the Northwest Straits Commission.

As directed by the SRFB process, the MRC solicited requests for proposals from local sponsors regarding specific projects documented in our local salmon recovery plan. The proposals were then evaluated and scored on Benefit to Salmon and Certainty of Success by our 8 member local Salmon Technical Advisory Group (STAG).

Salmon Technical Advisory Group (STAG)

Alan Chapman (Whatcom County Lead Entity /Lummi Fisheries Biologist)
Hillary Culverwell (Puget Sound Action Team)
Phil Green (The Nature Conservancy/Yellow Island)
Steve Hinton (Skagit River System Cooperative)
Kari Koski (Soundwatch/The Whale Museum)
Mike O'Connell – (Glenwood Springs Hatchery/Long Live the Kings)
Bob Warinner (Washington Department of Fish and Wildlife/Liaison to WRIA 2)
Sandy Wyllie-Echeverria (University of Washington)

The MRC in its role as the local Citizens Advisory Group (CAG) evaluated and scored the proposals based on Socioeconomic Impacts.

Marine Resources Committee (MRC) / Citizens Advisory Group (CAG)

| | |
|--|---|
| Laura Arnold (San Juan – Planning Consultant) | Mary Masters (Orcas-naturalist) |
| Mike Bertrand (San Juan -Town of Friday Harbor) | Victoria Parker (Orcas-San Juan Nature Institute) |
| Brian Calvert (San Juan-Port of Friday Harbor) | Kit Rawson (Tulalip Tribes) |
| Michael Durland (Orcas-business owner-Boatworks) | Joy Sevier (San Juan-Chamber of Commerce) |
| Terrie Klinger (University of WA/Friday Harbor Labs) | Jim Slocomb (San Juan-live aboard boater) |
| Skeet Lowe (San Juan-Fisherman) | Jonathan White (Orcas- boater, San Juan Preservation Trust) |
| David Lloyd (Waldron-water based business- water taxi service) | Tina Whitman (Orcas- Friends of the San Juans) |
| | Dennis Willows (San Juan- Friday Harbor Labs) |

The MRC based the final ranking of the project list on a weighted combination of the technical (85%) and socioeconomic (15%) criteria. All of the proposals fit our local strategy and this technical and citizens review process led to the ranked list of projects submitted for round 6 funding. (Note: MRC members Tina Whitman and Jim Slocomb abstained from the ranking process.)

The **Assessment and Protection of Kelp Project** scored the highest by both the local STAG and CAG. This project was solicited for sponsors via our RFP process and is specifically documented as a near term action in our recovery plan, “Complete kelp mapping begun by DNR for all of San Juan County for use in protection actions through critical areas regulation and in planning for shorelines at all governmental levels.” As San Juan County has approximately one third of the kelp in Puget Sound, improved protection of this important habitat for juvenile salmon feeding, migration and food webs will have regional impacts. Accurate information on the location and extent of kelp is required to ensure adequate protection through voluntary and regulatory means, including on-water zoning by the San Juan County Marine Stewardship Area, Critical Areas and Shoreline Master Program updates, boater and landowner awareness and management planning at the local, state and federal level.

The **Genetic Stock Identification of Juvenile Salmon Project** scored high by the STAG and CAG and fits the near term action identified in our local recovery plan to assess “salmon use of nearshore habitats in WRIA 2” and to “Support continuation of current research on the nearshore locations and habitat functions for use by juvenile and adult salmon.” Please note a correction from the technical review panel’s evaluation. This is a multi-year (3 year) study that is enhanced by the collection of genetic materials during Round 5 funded research, and the scope of sampling is sufficient to meet our local needs in order to highlight major sites (aggregation areas) used by juvenile salmon and to justify potential protection and restoration activities. Results of the proposed study will enable WRIA2 to identify nearshore areas utilized by ESA-listed stocks of salmon so that they can be given highest priority for protection and restoration/enhancement. It has been suggested, for example, that Puget Sound Chinook utilize the southern shores of WRIA2, while the Chinook observed on northern shores are probably from Georgia Strait. There is no scientific basis yet for evaluating such claims. While adult salmon from throughout Puget Sound and Georgia Strait have been found in WRIA2 waters, we do not know which stocks of juveniles actually utilize the nearshore of WRIA2, and whether stocks are completely mixed or at least partly segregated when they utilize nearshore resources. The fact that in two years of beach seining no CWT fish were found indicates that at least portions of some stocks migrate through WRIA2 without

utilizing nearshore habitats. Hence, the juvenile Chinook and chum that we observe feeding in WRIA2 nearshore habitats may or may not include endangered stocks as well as non-listed or Canadian stocks; and they may have different prey and habitat preferences - just as Eric Beamer's group found for Skagit-origin stocks in Skagit Bay.

The **Salmon Habitat Protection Blueprint Project** scored well by both groups as it is highlighted as a near term action in our recovery plan, "Identify key locations for protection and communicate them to conservation organizations that might acquire them in fee or through conservation easements." With over 400 miles of nearshore marine habitat and high shoreline development pressures, the Blueprint improves the efficiency and effectiveness of recovery efforts in San Juan County by concentrating limited resources on those habitats with high value for salmon and interested landowners. The Blueprint builds on past assessment and landowner education projects and increases the long-term protection of priority habitat through existing voluntary conservation strategies including acquisition, easement and tax-incentive programs.

The **Thatcher Bay Restoration and Assessment Design Project** is an excellent fit for the future implementation of our recovery plan. The project scored in fourth place primarily as we have not reached the point in our recovery plan to specifically identify restoration projects (we are currently working on updating our local plan to start identifying these opportunities.) However, we strongly support this project which is based on results of past nearshore habitat assessment work and can provide a model for similar restoration projects throughout the sound. The project will assess the potential to restore eelgrass habitat in Thatcher Bay. Chinook juveniles are known to rear in nearshore eelgrass beds foraging on sand lance, surf smelt and other forage fish. The project is intended to benefit salmonid species by restoring juvenile salmonid rearing habitat and by benefiting salmonid forage species; specifically pacific herring, sand lance, and surf smelt. The project will improve beach conditions at a documented surf smelt spawning site and may result in expansion of eelgrass habitat throughout the bay.

San Juan County is in the early stages of updating its Critical Areas Ordinances and Shoreline Master Program under the Washington State Growth and Shoreline Management Acts. These important updates will require assessment and mapping of San Juan County's nearshore habitat. San Juan County currently applies the results from forage fish and eelgrass nearshore habitat assessments (previously funded SRFB projects) as the "best available science" in all of our planning and permitting decisions. Results of the proposed assessment projects, such as Assessment and Protection of Kelp, Genetic Stock Identification of Juvenile Salmon, and Salmon Protection Blueprint along with the Thatcher Bay project would improve local protection of our marine resources as they are applied to long-range planning efforts and individual shoreline development proposals in San Juan County.

Approximately \$317,000 has been allocated in the first increment to support salmon recovery efforts in San Juan County and our total project list is for around \$350,000. We are respectfully requesting the Salmon Recovery Funding Board support all four proposals for San Juan County. All of the proposals submitted for this round have gone through the local Lead Entity process as recommended via the SRFB process and have been vetted by our local technical and citizens groups. We are confident that the money invested in San Juan County will be put to excellent use and will support salmon recovery locally and ultimately, regionally, since San Juan County fulfills an important juvenile and adult feeding and migration route for salmonids from multiple areas.

Sincerely,

Barbara Rosenkotter
San Juan County (WRIA2) Lead Entity Coordinator
Kit Rawson
San Juan County Marine Resources Committee, Chair

Attachments:

Letters of Support - San Juan County Board of County Commissioners, San Juan County Community Development & Planning, San Juan County Marine Resources Committee, Washington State Parks, San Juan County Planning Commission

Responses to Technical Review Panel Questions - Assessment and Protection of Kelp, Genetic Stock Identification of Juvenile Salmon, Thatcher Bay Restoration and Assessment Design

Attachments

Final Scoring and Ranking Worksheet

Letters of Support:

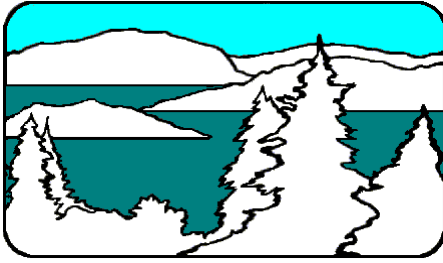
San Juan County Board of County Commissioners
San Juan County Community Development & Planning
San Juan County Marine Resources Committee
Washington State Parks
San Juan County Planning Commission

Responses to Technical Review Panel Questions:

Assessment and Protection of Kelp
Genetic Stock Identification of Juvenile Salmon
Thatcher Bay Restoration and Assessment Design

San Juan County (WRIA 2) 2005 (6th Round) SRFB Final Scoring & Ranking

| Order | Project Title | Avg Weighted Benefit (65%) Score (6.5) | Avg Weighted Certainty (20%) Score (2.0) | Avg Weighted SocioEcon (15%) Score (1.5) | Total Avg Weighted Score (10) | Grant Request | Sponsor Match | Total Project Cost |
|-------|--|---|---|---|-------------------------------------|------------------|------------------|--------------------------|
| 1 | Assessment and Protection of Kelp in San Juan County | 5.61 | 1.68 | 1.03 | 8.32 | \$149,500 | \$26,500 | \$176,000 |
| 2 | Genetic Stock Identification of San Juan Juvenile Salmon | 4.83 | 1.23 | 0.95 | 7.01 | \$30,619 | \$13,550 | \$44,169 |
| 3 | San Juan County Salmon Habitat Protection Blueprint | 4.31 | 1.55 | 0.95 | 6.81 | \$54,825 | \$9,675 | \$64,500 |
| 4 | Thatcher Bay Nearshore Restoration and Assessment Design | 3.36 | 1.23 | 0.55 | 5.14 | \$115,550 | \$21,000 | \$136,550 |
| | | | | | Totals = | \$350,494 | \$70,725 | \$421,219 |



Board of Commissioners

San Juan County

350 Court Street #1, Friday Harbor, Washington, 98250 • (360) 378-2898
Kevin M. M. Ranker, Dist. 1 • Alan Lichter, Dist. 2 • Bob Myhr, Dist. 3

November 29, 2005

Salmon Recovery Funding Board
Technical Review Team
P.O. Box 40917
Olympia, WA 98504-0917

Subject: Kelp Assessment and Protection, Genetic Stock Identification of Juvenile Salmon, and Salmon Blueprint and Thatcher Bay Projects

To Whom It May Concern:

The waters and shoreline of the San Juan Islands are an essential part of the larger picture for salmon recovery in the Puget Sound. All twenty-two populations of Puget Sound Chinook Salmon, along with multiple species of salmon from other watersheds, use the San Juan Islands for feeding and various life stages.

With over four hundred miles of shoreline and a relatively pristine and intact nearshore habitat, the primary salmon recovery goal for San Juan County is protection. However, with one of the highest current and projected growth rates in the State, incremental development is our primary threat to the local nearshore habitat.

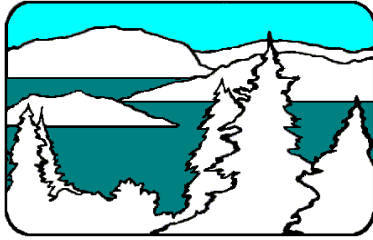
San Juan County has supported nearshore assessments for the protection and preservation salmon species and their habitat and prey since 2001. San Juan County currently applies the results from forage fish and eelgrass nearshore habitat assessments as the “best available science” in all of our planning and permitting decisions.

The projects submitted to the Salmon Recovery Funding Board for this round of funding all fulfill critical roles in providing information for the protection of our marine resources. With San Juan County’s extensive marine shoreline, accurate information on marine resources is a key component in the planning efforts for San Juan County.

San Juan County is in the process of updating its Critical Areas Ordinances and Shoreline Master Program under the Washington State Growth and Shoreline Management Acts. These decisive updates will require assessment and mapping of San Juan County’s nearshore habitat. Results of the proposed assessment projects, such as Kelp Assessment and Protection, Genetic Stock Identification of Juvenile Salmon, Salmon Blueprint and Thatcher Bay projects would improve local protection of our marine resources as they are applied to long-range planning efforts and individual shoreline development proposals in San Juan County.

Sincerely,

Kevin M. M. Ranker
Commissioner, District No. 1
San Juan Island



San Juan County

Community Development & Planning

135 Rhone Street P.O. Box 947 Friday Harbor, WA 98250
(360) 378-2354 (360) 378-2116 Fax (360) 378-3922

permits@co.san-juan.wa.us www.co.san-juan.wa.us

November 23, 2005

TO: Salmon Recovery Funding Board - Technical Review Team

SUBJECT: Assessment and Protection of Kelp Project, San Juan County

SRFB Project Number: 05-1500N

San Juan County supports the Assessment and Protection of Kelp Project proposed by Friends of the San Juans and the Washington Department of Natural Resources. San Juan County currently applies results from forage fish and eelgrass nearshore habitat assessments as 'best available science' to inform planning and permitting decisions impacting our land and water resources.

Kelp beds are specifically named as priority marine habitats for inclusion in upcoming Critical Areas Ordinances and Shoreline Master Program updates under the Washington State Growth and Shoreline Management Acts. Adequate protection of kelp beds in these decisive updates will require assessment and mapping of San Juan County's kelp habitat.

With over 400 miles of marine shoreline, accurate information on marine resources is a key component of planning efforts in San Juan County. Results of the Assessment and Protection of Kelp project will be applied to multiple long-range planning efforts in San Juan County, as well as to the review of individual shoreline development proposals, improving local protection of this priority marine resource.

Thank you for your consideration of our comments regarding parcel level application of the results from the San Juan County Kelp Assessment.

Sincerely,

Matt Zybas
Interim Director



TO: Salmon Recovery Funding Board
FROM: Jody Kennedy, San Juan County Marine Resources Committee
CC: Barbara Rosenkotter, San Juan County Lead Entity Coordinator
DATE: November 28, 2005

RE: Assessment and Protection of Kelp Project
SRFB Project Number: 05-1500N

As lead staff to the San Juan County Marine Resources Committee, I am writing in support of the kelp assessment project proposed by Friends of the San Juans. The San Juan Marine Resource Committee (MRC) provides a citizen-based forum to advise the Board of County Commissioners on marine issues. First established in 1996, the MRC serves to represent all members of the local community, including commercial users, scientists, environmentalists, fishers, and whale watch operators.

In 2004, San Juan County was designated a Marine Stewardship Area. This designation is part of a regional Marine Protected Area initiative to integrate science and community interests in an ecosystem based management strategy for San Juan County's marine waters. The overall goal of the marine stewardship area is to protect the unique and valuable marine resources of the islands while allowing sustainable use of marine resources to continue forever. In accordance with a 2005 work plan approved by the Board of County Commissioners, the MRC is pursuing the objectives of the countywide Marine Stewardship Area by identifying critical and/or sensitive marine areas to focus community stewardship efforts and to consider for addition levels of protection. To do this, the MRC is working with The Nature Conservancy, the Northwest Straits Commission, local, state, federal and tribal marine managers, marine businesses and community members who have an interest in San Juan County's marine resources.

With over 400 miles of shorelines, nearshore habitat is an essential component of marine ecosystems in the San Juans. Identifying critical and/or sensitive nearshore habitat areas and developing a better understanding of how the nearshore serves marine organisms and systems is critical to the success of the Marine Stewardship Area. The MRC has already integrated nearshore habitat assessment data for forage fish and eelgrass into the stewardship area and as a result marine recreators and shoreline property owners are more informed about how best to steward these important resources. By providing new and much needed data, the kelp assessment project will further the success of the Marine Stewardship Area and allow for greater protection of a priority resource.

To: Salmon Recovery Funding Board

From: David Castor, Washington State Parks

RE: Assessment and Protection of Kelp Project

SRFB Project Number: 05-1500N

Date: November 27, 2005

I am writing in support of the Assessment and Protection of Kelp Project, with a specific example of how habitat data facilitates improved protection.

Washington State Parks is currently implementing an improved boating facilities plan for marine parks in San Juan County. This project started simply to replace our existing mooring buoy systems with a more "environmentally friendly" moorage system. Results of the eelgrass mapping project have allowed us to expand our project goals to include no anchor zones, relocation of mooring sites, and long term scientific studies of eelgrass regeneration in high boat traffic areas. The eelgrass mapping data allowed us to gain acceptance for this project within our own agency and within the recreational boating community.

A spatial data layer of floating kelp, comparable to that done for eelgrass beds, would also be applied to improved management of the tremendous recreational boating traffic in the San Juan Islands.

Thank you for your consideration.

Sincerely,

David Castor
San Juan Area Manager
Washington State Parks & Recreation Commission

TO: Salmon Recovery Funding Board

FROM: Mike Kaill, Marine Scientist and SJC Planning Commission Board Member

RE: Assessment and Protection of Kelp Project

SRFB Project Number: 05-1500N

DATE: November 23, 2005

As a citizen's advisory body to the San Juan County Commissioners, the San Juan County Planning Commission relies on existing data sets to inform its decisions. The Friends of the San Juans Assessment and Protection of Kelp Project provide critical information to local decision makers.

The San Juan County Unified Development Code (UDC) protects kelp as an environmentally sensitive area. The UDC provides increased protection for "Marine Habitat Areas" that are "Fish and Wildlife Habitat Conservation Areas." Specifically, "all kelp and eelgrass beds," are provided the added protection of mandatory performance standards for any proposed development in that area.

San Juan County's marine habitats provide critical resting, feeding and migrating areas for a many important marine species including salmon, rockfish, marine mammals and seabirds. Kelp forests and macroalgae are critical in this regard. In the face of increasing pressures on marine environments from residential shoreline developments and associated docks, marinas and mooring buoys throughout the county, detailed information on the location and extent of kelp is needed to ensure protection.

Many of these species, such as rockfish and other rocky-reef inhabitants, are also impacted by over-fishing. They are caught in a two-way squeeze, faced with increased predation, they are also faced with diminished habitat.

I believe that it is critical to have current, accurate knowledge of the extent and condition of this important habitat. Trade-offs occur constantly between things like private docks, and fish habitat. Without good data, unfortunate decisions can be made... are being made.

Sincerely,

Michael Kaill, PhD

November 28, 2005

FR: Friends of the San Juans

TO: SRFB Technical Review Team

CC: Barbara Rosenkotter, San Juan County (WRIA2) Lead
Entity Coordinator

RE: Assessment and Protection of Kelp Project

SRFB Project Number: 05-1500N



- Response to Project of Concern Questions
- Letters of Support:
 1. *SJC Community Development and Planning,*
 2. *Washington State Parks,*
 3. *San Juan County Planning Commission,*
 4. *San Juan County Marine Resources Committee.*

Thank you for the opportunity to comment on the Salmon Recovery Funding Board (SRFB) technical reviewers Project of Concern (POC) comments. We appreciate your observations and feedback. As requested by technical team members, a summary of the primary project questions asked by SRFB reviewers and our responses are outlined below. In order to be thorough we are responding to all of the questions raised throughout the grant review process.

1. Why isn't the existing dataset sufficient?

The best existing dataset for kelp in San Juan County is the Department of Natural Resource's Washington State Shorezone Inventory. The Shorezone methodology was designed for regional application and as a result the Shorezone dataset is not sufficiently detailed to support protection at the parcel-level, the scale required for land management and policy. In addition, Shorezone data is line data only, providing a rough estimate of the linear extent of kelp but no information on bed width or area that would inform protection measures. For example- two shorelines could each show the same linear extent of kelp in Shorezone, but one might be 1 acre in area while the other is 50 acres. With over 400 miles of shoreline along the hundreds of islands in San Juan County, detailed information is needed to inform protection and restoration strategies. In addition, polygon (area, not line) data is required to protect kelp from the direct impacts of boating and boating facilities, a major impact throughout the San Juan County's waters.

In 2004 the Department of Natural Resources (DNR) conducted aerial photography of floating kelp for roughly one-third of San Juan County. Again, as fits their mission, the project was designed at the regional scale and the eastern San Juan County assessment work was one of seven survey areas scattered throughout Puget Sound. Outside of the current project proposal in partnership with Friends of the San Juans, DNR is not planning to 'finish' the San Juan County kelp assessment.

2. UWhat kelp is targeted for assessment?

The proposed project will complete floating kelp assessments for the two-thirds of San Juan County that remains to be surveyed using DNR aerial photo methodology for assessing kelp canopy. The assessment will complete canopy area assessments for kelp in all San Juan County waters, including near and offshore resources.

Kelp habitat in San Juan County is distributed within and around over 400 miles of shoreline distributed among approximately 20 ‘big’ islands and over one hundred smaller islands. Much of what might be considered an offshore distance in a more linearly aligned county functions as nearshore habitat in San Juan County and is strongly influenced by boat and land-based human actions.

In San Juan County’s salmon recovery plan, the term offshore is used to discriminate between types of kelp-canopy forming kelp versus under story kelp- not distance from shore. The county citizen’s committee and technical team are currently updating the local strategy and will address this issue. We believe that this choice of terminology in the WRIA 2 Chapter of the Shared Strategy Recovery Plan may have led to some confusion over the area to be targeted in the Assessment and Protection of Kelp Project. To be clear, the proposed project includes all floating kelp in San Juan County, both near and offshore.

3. How will improved information lead to the protection of kelp resources?

State law requires local governments to include the best available science to protect eelgrass, kelp beds, forage fish spawning beaches, salmon habitat, and shellfish growing areas when developing their Critical Area Ordinances.

Identification of nearshore resources are critical to knowing where important natural resources are and how much of them are there. Recent inventories and mapping efforts by WDFW, WDNR, Marine Resource Committees, local governments, and others have significantly helped fill many data gaps. Shared Strategies, Puget Sound, Action Team staff are also helping to identify and protect nearshore habitat that is critical to salmon recovery.

Friends of the San Juans has extensive experience applying the results of nearshore assessments to improved habitat protection. On an ongoing basis, Friends of the San Juans works closely with shoreline landowners and land managers to ensure the highest protection standards are being met for critical marine resources. In addition to increasing protection, previous nearshore assessment results also inform restoration and research actions by private and public entities See question 10 for examples of how past assessment results have been applied. Please also see attached letters of support for specific examples of how habitat data leads to improved protection.

As with previous nearshore habitat assessments, Friends’ staff will facilitate the application of kelp assessment results to improved protection. Specific protections that will result from the Assessment and Protection of Kelp Project include:

County-Level Protection of Kelp

- Kelp is specifically noted as a critical marine resource to be addressed in the Critical Area Ordinance (CAO) and Shoreline Master Program (SMP) updates required under the Growth Management Act (GMA). Current data sets lack sufficient detail to support implementation. CAO and SMP updates will protect known kelp resources through improved management of shoreline vegetation, overwater structures, underwater cables, aquaculture, marinas and resorts, and storm water.
- New information will be available at the parcel scale for site-specific project reviews by county permit center staff (boat ramps, mooring buoys, docks, piers, floats, marina expansion, etc.).
- Kelp habitat information will be applied to county-wide planning processes such as resort master programs, Marine Stewardship Area zoning, and infrastructure such as barge landings and essential public facilities.

State Protection of Kelp

- The Washington Department of Natural Resources (DNR) manages significant kelp resources. Activities DNR provides leases for include: parks, marinas, utility crossings, commercial aquaculture

and harvest, mooring buoys, outfalls, overwater structures and ferries. DNR discourages these activities in areas where kelp and eelgrass grow and can alter lease locations or conditions based on new assessment results.

- DNR has new conservation leasing and aquatic reserve programs which can provide long-term protection to bedlands with kelp. Current work to promote the use of conservation easements to protect marine resources can increase project success through the inclusion of upland tax parcels, tideland parcels and DNR lands.
- The Washington Department of Fish and Wildlife conducts site-level project reviews under State Hydraulic Code and can alter project design or location to protect kelp.

Voluntary Protection of Kelp

- The San Juan County Marine Resources Committee is developing on-water zoning schemes to protect nearshore and aquatic resources through improved understanding and changed behavior by residents, visitors and user groups as part of the San Juan County Marine Stewardship Area. This Marine Protection Area strategy currently relies on voluntary behavior changes but is mid-way through a formal planning process to identify and evaluate the range of management strategies, from voluntary to regulatory. The Marine Stewardship Area includes all the waters of San Juan County and has been adopted by the San Juan County Board of Commissioners.
- Kelp data will be used to identify priority nearshore marine habitat for protection by existing conservation tools including acquisition, easement and tax incentives.

Federal and Tribal Protection of Kelp

- Planning processes are underway for the two National Parks in San Juan County as well as for the United States Fish and Wildlife Service Wildlife Refuge System which manages 83 islands in San Juan County. Both ownerships have extensive kelp resources and can improve protections based on assessment results.
- Kelp assessment data will be applied to salmon and orca recovery planning by USFWS and NOAA. With extensive prey and habitat resources for listed salmon and orca, coordinated recovery efforts will require extensive information.
- Tulalip elders speak of the importance of orca whales in signaling the presence and location of salmon, especially sockeye salmon, schools. When we see the whales we know the fish are here. (Herman A. Williams, Jr. Tribal Chairman in a letter to Bob Lohn March 22, 2005).

4. Is this the most cost-effective method, what about boat-based surveys?

There are no existing accepted protocols for boat-based assessment of kelp. Aerial photography methodology is widely accepted to be the most cost effective assessment methodology for kelp for the level of high detail available per wide area covered. As one-third of the county has already been assessed using state accepted protocols, the decision was made to complete this data set. In addition, Friends of the San Juans has direct experience with the costs of boat-based surveys and protocol development through its eelgrass and forage fish habitat assessments; both of these projects cost substantially more than the proposed assessment and protection of kelp project.

5. Why not adapt project to only assess kelp in high-use mooring buoy/boating areas?

With over 400 miles of shorelines distributed on multiple islands and high boat usage by locals and visitors, virtually all of San Juan County waters constitute high-use buoy and boating areas. It would also be difficult to

identify which areas should be included as mooring buoys, frequent boat travel routes and other boating facilities that impact kelp are widely distributed in San Juan County.

Without a comprehensive, county-wide assessment, the data will only be applicable to current high-use regions. A limited assessment will not provide baseline canopy cover estimates or be easily transferable to county and regional protection, restoration or research applications. It also will not support increased protection through the wide range of specific protection actions outlined in the response to question 3.

In addition, the cost-effectiveness of flight time is enhanced by including more shoreline within an area.

6. What are the roles of Friends staff and GIS contractor in this project?

Friends will act as grantee and primary project manager for the duration of the Assessment and Protection of Kelp Project. In addition to coordinating the assessment components of the project, Friends staff will facilitate implementation of the suite of protection strategies outlined in the response to question 3. Friends has extensive experience with the staff time required to ensure that improved protection does result from assessments. Friends' staff will work closely with shoreline landowners, stakeholder groups, local, state and federal government, scientists, land and marine managers to achieve maximum protection for kelp habitat in San Juan County's waters.

The GIS contractor will use the following methodology to create a kelp habitat data layer for San Juan County (please note- this GIS work applies to DNR aerial photo assessment results for all of San Juan County, the 1/3 assessed in 2004 and the planned 2006 flights):

- 1) Create a high resolution polygon layer representing the land masses of the County. This will be used for masking the upland areas of the county during the photo interpretation process so that only water areas are included in the analysis.
- 2) Create a supervised classification of the spectral characteristics of the water areas of the county.
- 3) Collaborate with researchers to determine the spectral characteristics of the "edge" of the kelp areas.
- 4) Re-class the imagery into two classes (presence - absence) based on step 3.
- 5) Manual QA/QC to determine that no beach vegetation areas are included in the "presence" class.
- 6) Convert the "presence" class (derived above) that represents kelp into a minimum convex polygon layer describing the location and aerial extent of kelp.
- 7) Repeat 2 thru 6 till done.

In addition to creation of a countywide GIS map of kelp habitat, the GIS budget includes spatial analysis and mapping services related to the protection elements of the project. Friends' staff will work with the GIS contractor to develop and share project results through many of the following means: map books, data disks, mailings, land manager and county staff trainings. Friends' staff and the GIS contractor will also conduct analysis of all or subsets of the data depending on the specific restoration, protection, and planning or project specific purpose.

7. Does WDNR have plans for aerial assessment of kelp for the remaining two-thirds of San Juan County that have not been assessed?

In 2004 the Department of Natural Resources (DNR) assessed floating kelp for roughly one-third of San Juan County using the more detailed, aerial photography methodology. As fits their mission, the project was designed at the regional scale and the eastern San Juan County assessment work was one of seven survey areas

scattered throughout Puget Sound. Outside of the current project proposal in partnership with Friends of the San Juans, DNR is not planning to ‘finish’ the San Juan County kelp assessment.

8. Will the proposed project lead to an understanding of status and trends necessary to link management actions with habitat changes?

This project will provide the first baseline assessment of kelp for San Juan County. With approximately one-third of the kelp resources in Puget Sound, this basic assessment information is required to facilitate future understanding of status and trends.

9. How will the polygon assessment data affect behavior (by boaters and/or landowners) to benefit salmon.

The benefits and importance of kelp habitat is an unknown to most people. Boaters who reside and visit the San Juans will be better able to avoid damaging kelp resources if they are mapped and included in the Marine Stewardship Area Plan. Landowners with kelp habitat on their shoreline may reduce upland water quality impacts if they understand its value. For example, until recent nearshore assessments by Friends of the San Juans, very few visitors or residents of San Juan County understood the importance of their shorelines to marine species. It is now incredible how many people understand about forage fish spawning habitat and eelgrass habitat; it is also impressive how many contact Friends to learn more about how they can protect those resources on their property.

Please also see Voluntary Protection section of the response to Question 3.

10. How have other nearshore habitat assessment results in San Juan County been applied?

Nearshore data from forage fish and eelgrass assessment projects have been applied extensively to the protection and restoration of nearshore habitat in San Juan County. The following list highlights the wide range of scales these assessment results have been utilized:

- 12.66 miles of forage fish spawn habitat and over 140 linear shoreline miles of eelgrass are now protected under Washington State and San Juan County Code.
- Every shoreline development activity in San Juan County, from county-wide stormwater systems to a private dock proposal, is reviewed for its impact on documented forage fish spawning and eelgrass habitat.
- Every management plan in SJC with nearshore habitat responsibility or potential impacts is reviewed for its impact on documented forage fish spawning and eelgrass habitat.
- A broad base of support, from private landowners, industry and government, exists for protecting San Juan County’s high quality nearshore habitat as a direct result of the outreach associated with these assessment projects.
- Project results and methods have been applied to numerous outreach, research, restoration and protection projects at the local, county, and regional scale.

The more detailed list below provides an overview of how nearshore habitat data from past San Juan County assessments have been used:

Site Level Protection & Restoration

- Shoreline development project proposals (docks, marine railways, boat ramps, mooring buoys, structure setback exemptions, bulkheads,): The data is used by agents for the applicants as well as county, state and federal staff in project review and public and private entities (tribes, ngos, landowners) in public comment processes.

- Improved management by private landowners: (one example) Orcas landowners decided against plans to implement a bulkhead.
- Improved management by public landowners: (one example) the SJC Land Bank planted trees along a surf smelt beach where vegetation has been removed.
- Identification of restoration projects and sites: marine riparian (Lopez, Orcas, Shaw and San Juan-implemented), Mud Bay (soft shore assessment underway); Thatcher Bay (mill debris-planned), Westcott Bay (eelgrass research and restoration-underway),
- Site review of management plans for Land Bank, San Juan Preservation Trust, The Nature Conservancy and other shoreline properties.
- 12.66 miles of documented forage fish spawning beaches protected under Washington State Administrative Code and San Juan County Code.
- 140 linear miles of eelgrass protected under Washington State Administrative Code and San Juan County Code.

County Protection

- Plan for Parks, Recreation, and Preserved Lands for San Juan County.
- SJC Stormwater Planning (countywide compliance with ecology updates, UGA specific,).
- SJC Barge Landings and Essential Public Facilities assessments.
- San Juan County Land Bank and San Juan Preservation Trust strategic conservation plan.
- Applied to zoning scheme for San Juan County Marine Stewardship Area.
- Island Oil Spill Response Team uses data to prioritize response locations.
- Established priority nearshore habitat regions that have been included in local salmon recovery strategy.
- Data used in development of a soft shore restoration blueprint for San Juan County (landowner interest, biological priority and physical feasibility of removing beach structures such as bulkheads). Project is currently in-progress.
- Data used in planning, design and implementation of underwater service cables (OPALCO, CenturyTel.,).
- Critical Areas Ordinance and Shoreline Master Program.

Regional Protection

- WDFW hydraulic project review.
- Regional salmon recovery planning.
- Shoreline and in-water project review by Corps of Engineers.
- National Parks Planning processes.
- DNR mooring buoy monitoring and permitting program.
- State parks review and planning for mooring buoy/anchoring for marine parks.

Research

- Informs DNR Puget Sound submerged vegetation monitoring program.
- Informs USGS Coastal and Marine Geology Program Puget Sound research.

- Used by local Minke whale and seabird research projects.
- Beach reach data applied to multiple UW projects.
- Applied to science projects for students from: Friday Harbor, Orcas, Lopez, Shaw, Stuart, Spring Street and Waldron Schools as well as Western Washington University.

Outreach and Education

- Information included in new property owner packets that are sent to approximately 50 ‘new-to-the-San Juans’ landowners each month.
- Shoreline landowner stewardship guide created and distributed to targeted stakeholders (shoreline landowners in priority forage fish regions, realtors,).
- In-service trainings for county land managers and planners (also included relevant state, federal and private land managers).
- Workshops, field trips, field research, site visits, lectures for landowners, general public, user groups, schools, managers,).
- Media
- Over 350 landowners, 600 students, 50 realtors, 175 community volunteers, 48 land managers and 20 teachers have participated in priority species, habitats and management workshops related to nearshore habitat assessment work Friends has conducted in San Juan County.

Genetic Stock Identification of San Juan Juvenile Salmon
SRFB Project Number: 05-1527N
Lead Entity: San Juan County (WRIA2)
Project Sponsor: CSCSE-Samish Indian Nation

Questions and Responses for WRIA 2 Genetics proposal

A. Questions from August Review.

1. Yes, it is a project of concern.

Response: This proposal will determine if the juvenile salmon that are feeding in WRIA2 nearshore habitats include listed stocks. It will also determine the extent to which salmon stocks differ in prey and habitat preferences as they migrate through the San Juan Islands, as they do during the earlier phase of their migrations through mainland estuarine and nearshore habitats. This will help San Juan County prioritize habitats for acquisition/protection/restoration. It will increase the likelihood that the county will fully protect the most important habitats for the recovery of listed salmon, since the county cannot realistically give full protection to all 400 miles of shoreline.

2. How could the proposal be improved?

a) Focus the objectives.

Response: The primary and sole objective of this proposal is to identify which stocks of salmon utilize particular types of nearshore habitat in WRIA 2 (e.g. eelgrass, high-energy beaches, rocky headlands, protected bays) so that San Juan County can adopt stock-specific protective measures targeting the stocks of greatest concern.

b) Benefit to salmon, contribution to informed policy decisions:

Response: This study would fill a fundamental gap in our understanding of resource use by juvenile salmon in WRIA 2, and is a logical extension of the same applicant's Round 5 project identifying preferential habitat use by species (as opposed to stocks). The knowledge acquired will be applied directed to policy decisions giving priority to particular WRIA2 habitats for acquisition/protection/restoration based on a scientific assessment of which habitats are most heavily used by the most threatened stocks.

c) More information regarding sampling design:

Response: Based on results of 8 months of beach seining at 14 stations completed in 2005, a subset of 5 stations will be targeted for collection of 200 juvenile salmon in 2007: 5 Chinook, 5 coho and 5 chum juveniles from each station when aggregations of juvenile salmon are encountered. The choice of stations addresses the hypothesis that juvenile salmon, in particular Chinook, target coarse high-energy substrates such as the unprotected gravelly beaches of north Orcas and south Lopez, rather than protected vegetated bays. We will look more closely at the genetic stock composition of the juvenile salmon using four high-energy beaches and juvenile salmon using one other habitat type (sheltered vegetated bays) as a control. Priority will be given to the genetic stock identification of Puget Sound Chinook (as opposed, e.g., to Chinook of British Columbia origins) and Hood Canal chum (as opposed to chum stocks from mainland rivers), which are readily identifiable using existing DNA libraries. Greater refinement, such as the identification of Puget Sound Chinook to particular mainland rivers/streams, is also planned but is likely to be incomplete due to the current state of DNA libraries. However, from a management perspective, the most urgent questions will be answered by identifying the habitat preferences of Puget Sound Chinook and Hood Canal chum; and all fish collected will be archived for future re-analysis using other sources of funding. It should be noted that the Samish laboratory is a partner in a proposal recently submitted by Kurt Fresh and Eric Beamer to USFWS that would attempt to refine genetic stock identification throughout the North Sound—work that would extend beyond the current Round 6 proposal but at much greater cost and time.

d) How can Stohr and McGowen's data be used to answer this proposal's questions?

Response: Stohr and McGowen looked at adult salmon, and their study shows that at least 3 currently listed stocks pass through the waters of WRIA2 during their inbound migration to the Nooksack, Lower Skagit and Dungeness River watersheds. It does not tell us whether these listed stocks utilize nearshore resources, or whether the same stocks or other listed stocks utilize WRIA2 habitats as juvenile outmigrants. The point of the applicant and Lead Entity in mentioning Stohr and McGowen is that WRIA2 appears to be habitat for inbound spawning adults ranging from Puget Sound northward through the Straits of Georgia, as well as the outbound juveniles that have been the focus of the applicant's Round 5 beach seining study.

e) Does sampling and analysis match or complement Stohr and McGowen?

Response: This study would complement Stohr and McGowan by focusing on out-migrating juvenile salmon, which may include the same stocks as the in-bound fish identified by Stohr and McGowan. It would be very exciting if outbound juveniles and inbound adults of a particularly stock tend to prefer the same prey and habitats. Our modest pilot study of stomach contents from inbound salmon (in 2004) found a surprisingly high proportion of prey that we have also seen in juveniles seined in the San Juan Islands, such as decapod larvae and terrestrial insects. The present proposal will lay a groundwork for establishing the extent to which juvenile and adult salmon habitat requirements overlap in WRIA2.

f) What has been learned from ongoing studies that identify CWT salmon?

Response: Our team brought 90 juvenile Chinook to hand in 2004-2005 in WRIA2. To date we have found only one juvenile with an adipose fin clip and no CWT fish in WRIA2 nearshore habitats.

g) Does the NMFS tow net study check for CWT, if so how does ongoing study fit in with that work?

Response: The NMFS tow net study does check for CWT, and we actively cooperate with both the NMFS juvenile salmon surveys and Skagit River System Cooperative's studies, sharing data sheets and spread sheets so that all our work can be comparable. Unlike the NMFS tow netting, the studies carried out by CSCSE-Samish with Round 5 funding and by the Skagit River System Cooperative associate juvenile salmon with particular nearshore habitats, rather than collecting them under conditions where it is possible that the fish collected are merely migrating through the area without preying on nearshore resources.

Questions from October...

a) Species-specific information:

Response: We will prioritize the identification of juvenile Puget Sound Chinook and Hood Canal chum salmon; however, we will also collect coho tissue for GSI analysis as our overall funding permits.

b) The project appears focused on identifying Skagit-origin juvenile Chinook:

Response: This project is designed to identify all Chinook, chum and coho stocks of concern from all parts of Puget Sound and Hood Canal that may utilize the nearshore habitats of WRIA2. Sampling stations are laid out from north to south (Waldron and Jones Islands, southern San Juan Island, southern Lopez Island) in such a way that we may see more B.C. origin fish at the northern sites and Puget Sound origin fish at the southern sites. Skagit River salmon are highlighted only because they have been well studied genetically and with respect to the diversity of their early life history patterns; Beamer has used Skagit stocks to investigate life history diversity within and between stocks, and if we identify some of the same fish in the San Juan Islands, our work will complement his. In any event, however, we aim to identify all the Chinook, coho and chum in our sample as precisely as possible, regardless of their origins.

c) Limited Sound-wide applicability:

Response: The proposed project is likely to identify juvenile salmon from all parts of Puget Sound in WRIA2 nearshore habitats, and will therefore increase our knowledge of the life histories and habitat

requirements of salmon stocks managed by all WRIAs on the Sound. This work is also coordinated with juvenile salmon research elsewhere in Puget Sound, through the applicant's cooperative relationship with NMFS/NOAA Fisheries. Without data on the habitat preferences and prey targets of juvenile salmon migrating through the San Juan Islands, information about many or all stocks of Puget Sound salmon would be incomplete.

d) Inter-annual variability will limit the data's usefulness.

Response: Multi-year studies would be necessary to confirm the level of persistence of habitat use patterns over time. That will involve considerably greater expense than the present proposal. We must first establish the extent to which stocks use different habitats, which we believe will be indicated by analysis of the three years of samples and data (2004-2006) we will have available to us under previous funding; only then may we be justified in collecting the larger data sets needed to determine the direction and likelihood of changes in habitat use patterns over time.

e) Information is not sufficient to assess opportunistic versus genetic predisposition to occupy a particular habitat.

Response: This study will not be able to determine whether juvenile salmon sampled in WRIA 2 are genetically predisposed to occupy the habitats in which we find them. A much longer data series would be required to rule out opportunistic responses to the prey available. However, our 2004 pilot study and monthly seining in 2005 have thus far found juvenile salmon consistently in particular habitats, and we will have at least one more full year of data in 2006. Consistency of use is important for management, regardless of the underlying cause.

f) Is this level of detailed stock origin essential for habitat restoration/conservation?

Response: We must have a mechanism to prioritize habitat restoration/conservation. In WRIA 2 there are more than 400 miles of shoreline under private, local, state, and federal jurisdictions, and the second highest growth rate in the State. Pressure on the county to permit shoreline development is intense. The credibility and effectiveness of local measures will benefit from greater specificity and priorities for the protection of *particular* shorelines because of their role in the life cycles of particular stocks.

g) No need to identify areas of origin as this has been done with CWT recoveries.

Response: This is true for the adults. We have no information regarding the juvenile life history stage. The fish we have captured so far are not CWT so we cannot obtain information regarding stocks from that source.

To: Barbara Rosenkotter, Lead Entity Coordinator, San Juan County (WRIA 2)

From: Alison Studley, Skagit Fisheries Enhancement Group

Date: November 16, 2005

RE: Thatcher Bay Nearshore Restoration Assessment and Design, SRFB # 05-1518N

The following are answers to the SRFB review team's questions regarding the Thatcher Bay Nearshore Restoration Assessment and Design project submitted by the Skagit Fisheries Enhancement Group through the San Juan Marine Resources Committee.

1) Would like some information about how potential contaminant removal could affect project implementation and timing.

The Thatcher Bay project has only requested funding for assessment and design phases right now. The purpose of the assessment and design phase is to determine the answers to many questions surrounding the removal of the contaminant, including its impact on the timing and implementation of the project.

2) Would also like to have salmonid presence substantiated over the course of the assessment in order to evaluate cost-benefit issues.

SFEG is very interested in this information as well, as it should be better documented. The Skagit River System Cooperative and Dr. Tina Wiley-Echeveria have expressed interest in this project and SFEG will pursue partnerships with both of them to substantiate additional salmonid presence during the assessment phase of the project. Presence would be determined by conducting beach seines.

3) It is strongly recommended that the project deliverables include a detailed monitored plan.

SFEG has included in the Thatcher Bay proposal, funding to work with Dr. Sandy Wiley-Echeveria and a team of other scientists and students at the University of Washington to create a detailed monitoring plan for the re-establishment of eelgrass in the Bay (please see attached letter). In addition, SFEG will be happy to include as a project deliverable, a detailed monitoring plan that addresses the other items in question including salmonid presence, forage fish spawning habitat and epibenthic macroinvertebrate monitoring.

DRAFT DOCUMENT
21 July 2005

Thatcher Bay Feasibility Study: UW Component

Dr. S. Wyllie-Echeverria, Center for Urban Horticulture, UW Botanic Gardens, University of Washington and students will collaborate with Dr. Eric Grossman, U.S. Geological Survey, Western Coastal and Marine Geology Program, Pacific Science Center, Santa Cruz, CA and Dr. Mark Fonseca, Applied Ecology and Restoration Research, NOAA, National Ocean Service, Center for Coastal Fisheries and Habitat Research, Beaufort, NC and Dr. Joel Elliott, Department of Biology, University of Puget Sound to assist the Skagit Fisheries Enhancement Group in the development of a conceptual model to guide wood waste removal within the southern reach of Thatcher Bay, Blakely Island, San Juan County and launch a program to allow *Zostera marina* (eelgrass) to naturally recruit into the site following this removal. While the distribution and density of *Z. marina* and other seagrasses can be impacted by various natural and human-induced activities (Short and Wyllie-Echeverria 1996), we suspect that the accumulation of wood waste in the intertidal and subtidal regions of the southern reach of Thatcher Bay severely limits the growth of *Z. marina* in these regions. This assumption is based on the fact that the release of hydrogen sulfide, a by product of wood waste leaching in the sediment, can lower the redox potential of this sediment and (a) create a hostile environment in the *Z. marina* rooting zone and (b) prevent the establishment of seedlings (e.g., Goodman et al. 1995, Hebert and Morse 2003, Gayaldo et al. in review).

The role of the UW team will be to:

- 1) Use an underwater video system (Norris et al. 1997) to prepare a map detailing the distribution of the extant population of *Z. marina* in the subtidal region of the southern reach of Thatcher Bay in the spring of 2006 to help determine if this population is adequate to colonize the site (Lead scientists: Wyllie-Echeverria and Elliott).
- 2) Sample the sediment matrix within the southern reach of Thatcher Bay in the spring of 2006 to determine if the hydrogen sulfide environment is limiting *Z. marina* growth (Lead scientists: Elliott and Wyllie-Echeverria).
- 3) Based on ongoing studies in San Juan County, predict the rate of sediment accumulation at the site following wood waste removal (Lead scientists: Grossman and Wyllie-Echeverria).
- 4) Based on ongoing studies to describe natural recovery rates of *Z. marina* in San Juan County and the Spatially Articulated Injury/ Recovery Model developed by the Center for Coastal Fisheries Habitat Research, predict the amount of time needed for *Z. marina* to colonize the site following wood waste removal. (Lead scientist: Wyllie-Echeverria and Fonseca).

Preliminary budget: \$15, 500

References

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- Hebert, A.B. and J.W. Morse. 2003. Microscale effects of light on H₂S and Fe²⁺ in vegetated (*Zostera marina*) sediments. *Marine Chemistry* **81**(1-2):1-9.
- Norris, J.G., S. Wyllie-Echeverria, T. Mumford, A. Bailey and T. Turner. 1997. Estimating basal area coverage of subtidal seagrass beds using underwater videography. *Aquatic Botany* **58**:269-287.
- Short, F.T. and S. Wyllie-Echeverria. 1996. Natural and human-induced disturbance of seagrasses. *Environmental Conservation* **23**(1): 17-27.

Snohomish Lead Entity comments

-----Original Message-----

From: Neuman, Martha [mailto:martha.neuman@co.snohomish.wa.us]

Sent: Monday, December 12, 2005 2:24 PM

To: Geppert, Rollie

Cc: Balcomb, Heather; tarag@iac.wa.gov

Subject: Draft SRFB 2005 report comments

Rollie,

Thank you for the opportunity to comment on the draft 2005 Salmon Recovery Funding Board report. We very much appreciate the acknowledgment of our strategy and list by the excellent Fit to Strategy ratings.

In the section, "Relationship between Strategies, Recovery Plans, and Project Lists, I noticed a comment given to both the Snohomish and Stillaguamish lead entities, but not others, about the need for strategic approaches to project implementation and scheduling (e.g., habitat work schedule). I agree with the comment, however, it does not belong in the narrative section as it has no bearing on the questions related to the regional plans. In addition, it applies to all lead entities. I request that it either be:

- 1) added to all lead entity summaries in a more appropriate location,
- 2) removed from the Snohomish and Stillaguamish narratives and report, or
- 3) removed from the Snohomish and Stillaguamish narratives and added to the body of the report.

Thank you,

Martha Neuman
Snohomish Lead Entity Coordinator

Martha Neuman, Senior Planner II
Snohomish County Department of Public Works
Surface Water Management Division
425-388-3464, ext. 4657
www.surfacewater.info

-----Original Message-----

From: Edwards, Sean [mailto:sean.edwards@co.snohomish.wa.us]

Sent: Tuesday, December 13, 2005 1:54 PM

To: Geppert, Rollie

Cc: pstevenson@stillaguamish.nsn.us

Subject: RE: Draft SRFB 2005 report

Hi Rollie,

Thanks to you, your staff, and the Review Panel for all of your hard work on this report.

We have the following comments:

1. Please check the spelling of "Stillaguamish" throughout the document -- I found a typo in Table 2.
2. We concur with Martha Neuman's comments regarding references to the Habitat Work Schedule in the Stillaguamish and Snohomish ratings narratives.
3. We are quite happy with the "Excellent/Excellent" rating for the Stillaguamish project list fit to strategy. The Stillaguamish Co-Lead Entity Organization has worked hard to develop a good strategy, solicit good project proposals, and we look forward to facilitating the implementation of these projects.
4. In 2006 we intend to refine our Stillaguamish habitat restoration and protection priorities in preparation for the next SRFB grant cycle.
5. As we prepare our 2006 Stillaguamish salmon recovery work program, we are guessing that the next SRFB grant cycle will begin in May. Although this is uncertain because of various unknowns, we encourage the SRFB to establish the schedule for the next grant cycle as soon as possible so we can efficiently plan our local work program.
6. To improve local community awareness about our WRIA 5 project list, we intend to notify our citizen committee and interested parties about the Dec. 19-30 SRFB public review opportunity.

Best regards,

Sean Edwards, Senior Planner
Stillaguamish Watershed Co-Lead Entity Coordinator

December 13, 2005

Steve Leider, Team Leader, 6th Round Review Panel
Salmon Recovery Funding Board
PO Box 40917
Olympia, WA 98504-0917

Dear Salmon Recovery Funding Board Members, Designees, and Mr. Leider:

RE: Response to Draft Review Panel Ratings and Narratives

Thank you for the opportunity to respond to the SRFB draft Review Panel ratings. We appreciate the expertise and collective vision of the Review Panel members, and hope to continue this useful dialogue to improve our strategy and compete successfully for grant funding through the SRFB. The members of the community and technical committee members of WRIA 13 have invested a great deal of effort to develop the strategy (and projects) for several years, and hope that the culmination of that experience shows in the intent of this strategy.

Clearly, the WRIA 13 strategy is still in development and some ideas are not fully developed, and others are not clearly articulated. We hope that the following response makes clear the intentions of the strategy, and generates more critique from the SRFB, so that we can continue to improve our understanding of our geographic areas and the fish that rely on them, and to develop a cohesive way to sustain them.

I have included page numbers from the WRIA 13 strategy, for your reference, in this response.

Response to Certainty rating as “Good / Fair”

The WRIA 13 strategy found its basis in the Limiting Factors Analysis (LFA), utilizing this document as a starting point for discussion and further studies. In 2003, the joint strategy work of the WRIA 13 and 14 workgroups revised the LFA with new information and relevant data. Strategy development continued with the combined workgroup, identifying the needs of fish in the freshwater and nearshore environments. High priority actions for each sub-basin were determined using relevant studies, particularly within the nearshore, and the professional biological expertise of the Technical Committees. This information constitutes best available science for our area. Considerations for establishing these actions were restoring the streams natural functions within a five-year time frame. The freshwater systems have only begun to be modeled by the Squaxin Island Tribe, who have used EDT for several streams but have been unhappy with the parameters and are experimenting with other modeling programs. This data has not been incorporated into the strategy as the model was not ideal for the small streams we have in the Deep South Sound. Therefore the designations for high priority actions within each sub-basin represent the best science we have based upon empirical data through professional

activities. Given our five-year time horizon, the activities outlined as high priority for each sub-basin will restore crucial habitat process and function to the South Sound vital for salmon.

Response to Fit Actions and Geographic Areas rating as “Fair”

The WRIA 13 strategy attempts to build a case that our streams are part of a larger fabric of the Deep South Puget Sound (including WRIA 14 and 15), a unique series of shallow finger-like inlets, each with their own character (p.11). We understand that the Deep South Sound Tributary coho are scattered broadly among the numerous small tributaries that drain to these inlets and their life strategy utilizing small headwaters for spawning and rearing is well suited for the region. Our strategy to help recover this nearly depressed stock builds on maintaining the diversity of these small drainages to support sub-populations across the landscape (p.16).

Of the 150 coho streams in our region totaling 212 stream miles, nearly 20%, or 39 total miles are located in WRIA 13 (p.16). The streams of WRIA 13, therefore, have a significant role in the success of these coho salmon, despite their apparent size. We consider each of the three inlets (Budd, Henderson, and Eld) to have unique attributes and consider the sub-populations of salmonids distributed geographically among them (e.g. Eld Inlet Chum, Henderson Inlet Chum) to be important factors to the success of the species as a whole.

The stream ranking model developed by the Co-Managers identifies “key streams” in the South Puget Sound, taking into account several factors such as stream length, condition of habitat and numbers of species utilizing each stream (p.44). The model, which favors a multi-species approach, produces a numeric score, which allows a comparison of streams based on their attributes. The numeric scores were lumped into a set of 3 tiers for simplicity in this strategy (p.17). This model is one tool to understand the significance of different drainages in the area.

We recognize the importance of this ranking in the context of the larger landscape, to understand which streams are the most intact and which are capable of sustaining the most fish and most fish species. In our strategy, however, we attempt to go beyond identifying “key streams”, because in order to recover a depressed stock we felt the need to consider the specific needs of the specific stock within its specific geographic range (p.17). For coho, the relationship of the sub-populations of fish to the streams and nearshore habitat of each unique inlet is a central theme we have begun to develop (p.14).

Budd Inlet historically hosted a diverse run of salmonids in its short streams. Almost all the streams in this inlet are now impacted to some degree by urbanization, as a result of the heart of Olympia being developed on the mouth of the Deschutes River (p.21). For coho utilizing this inlet, there is limited certainty of success.

Fish passage is limited in 5 out of the 6 streams supporting coho in Budd Inlet, and access to intact habitat is very rare in Budd Inlet (p.22, Appendix C). (The Deschutes and its tributaries support Deschutes coho, and are not included in this count). Water quality is the major concern in our urbanized drainages, though we continue to find resident fish (juvenile salmonids, resident cutthroat, sculpin, and dace) in our streams (p.24). The biotic integrity (as measured by B-IBI) also remains moderate to high (City of Olympia, unpublished data).

The Ellis Creek watershed is one of the only intact basins in the Budd Inlet – where the likelihood of coho survival success is high. Its location in a city park near downtown Olympia offers protection and outreach possibilities unique to other watersheds in the area (p.61). In terms of our strategy, this stream has a unique relationship (or in other words, “high priority”) to coho in Budd Inlet, and the specific culvert replacement project proposed by City of Olympia and Thurston County this year is a significant project in the strategy.

In recognizing the unique opportunity to understand spawning and rearing success of newly opened habitat, the City of Olympia contracted Washington Trout to a 7-year fish monitoring study. In 2006, the City will replace a barrier culvert at the mouth of a much more urban stream, Schneider Creek, (which is across the inlet from Ellis Creek), and the pairing of the two projects (pending funding for Ellis) will hope to show differences in the restoration success between an urban and rural stream.

The study goal is to characterize fish populations for one or more years both before and after fish passage is restored in these two watersheds. The study results will allow for inter-basin, and inter-annual within basin comparisons of fish population parameters. The study design includes fish spawning surveys to count and assess condition of adult fish, and resident and juvenile fish surveys to determine fish species composition, abundance, and physical condition. This study hopes to shed light on the effectiveness of urban stream restoration to inform salmon recovery strategies for urban areas.

Each autumn, the returning fish in Olympia (primarily Deschutes Chinook) are celebrated by the community and Stream Team Salmon Stewards at the 5th Avenue Bridge. The opportunities for outreach and education on salmon recovery and impacts of urbanization on the Puget Sound increase many-fold at such viewing sites as Stewards engage the public by answering questions and discussing the lifecycle of salmon. Despite the harm of urban impacts on habitat, the support for salmon recovery is very high in the urban core (p.18).

The Ellis Creek fish passage project joins the community values element with the technical strategy in a seamless fashion. Not only is this project restoring passage to the healthiest coho stream in lower Budd Inlet, it is also one of the most visible (and perhaps the most anticipated) salmon restoration project in the area. The Ellis Cove trail, a popular walking path in Olympia’s Priest Point Park, crosses the mouth of the existing culvert, and offers spectacular views of the intact estuary. Our strategy recognizes that a project must address both these sets of concerns (p.90).

Our strategy is based on setting priority actions to priority stocks, given an understanding of their geographic extent, the limiting natural processes, the condition of their habitat, and the support from the community. The strategy attempts to emphasize the needs of a specific stock and explore its relationship with the inlets of WRIA 13, in this case, Deep South Sound Tributary coho in Budd Inlet, by integrating the Limiting Factors Analysis, a multi-species stream ranking, and salmonid life strategies.

While this approach may not be effectively described in the strategy, we hope that the elements of this conceptual approach are clearer to Review Panel members, given this explanation and a second (or third) reading. And given this understanding, we urge the members to offer further criticism, and if compelled, to re-evaluate our rating for this category.

Thank you once again for your time and consideration.

Sincerely,

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WRIA 13 & 14 Lead Entity Coordinator
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Steve Leider, Team Leader, 6th Round Review Panel
Salmon Recovery Funding Board
P.O. Box 40917
Olympia WA 98504-0917

RE: Responses to Draft Review Panel Ratings and Narratives

Dear Salmon Recovery Funding Board and Mr. Leider,


Thank you for the opportunity to provide a response to the draft SRFB review panel ratings and narratives. The WRIA 13 Salmon Habitat Recovery Committee has reviewed the draft ratings and narratives and have provided the following responses. The Lead Entity is concerned with the initial ratings and narratives and believe they do not accurately evaluate how well the WRIA 13 strategy identifies and prioritizes critical areas to focus salmon recovery actions. In addition, it misrepresents and simplifies the amount of expertise, time and effort of local citizens, Tribes, scientists, resource managers and environmental planners have put into developing strategies and implementing habitat conservation and restoration projects. Our Lead Entity has been successful each year for developing project lists that are focused in high priority areas with high certainty of success and have extensive community support and involvement. We are concerned how the SRFB is going to use such vague and general comments to allocate funding to Lead Entities. Below are specific comments regarding the draft ratings and narratives.

Watershed and marine ecological processes: Good / Fair

Certainty: Good / Fair

Actions and geographic areas : Fair

The 2005 SRFB round began with five projects, three of which were located within high-priority areas and all addressed high-priority actions. After time, four of these projects were removed due to various issues including sponsor match, community support, property purchase, etc. This left one project remaining: Ellis creek fish passage project. After assessing numerous factors and balancing the interests of the community, the Workgroup decided to hold the development of additional projects for submittal, rallying behind this expensive and worthy project. The issues discussed by the workgroup were:

the habitat quality of Ellis creek for Coho, the highest priority species within the WRIA; the re-establishment of 1.5 miles of habitat specifically for Coho as Ellis is a Coho stream and given the precipitous decline in returns, this addition will help repopulate South Sound and particularly Budd t_[a1]; the remediation of the highest priority limiting factor on Ellis creek; the partnerships and commitments between the City of Olympia, Thurston County, Washington Trout, and Stream Team; and the projects ability to restore the marine nearshore function of Ellis Cove all coupled together to make this project our number one priority.

While Ellis creek is a Tier B system, its importance and habitat quality cannot be dismissed. The length of the creek is the only factor preventing its inclusion as a Tier A stream, all other criteria are met. Repeatedly we hear and discuss the need to complete projects that go beyond the low-hanging fruit. This project is a top of the tree project, blending science with community interests while bringing in 41% cash sponsor match. It has the unanimous support of the 27 stakeholder groups represented by the Workgroup. After working for four years to gain community and stakeholder participation, support and match, this project has earned its spot as the number one project submitted for this round.

December 13, 2005

Steve Leider, Team Leader, 6th Round Review Panel
Salmon Recovery Funding Board
PO Box 40917
Olympia, WA 98504-0917

Dear Salmon Recovery Funding Board Members, Designees, and Mr. Leider:

RE: Response to Draft Review Panel Ratings and Narratives

Thank you for the opportunity to respond to the SRFB draft Review Panel ratings. We appreciate the expertise and collective vision of the Review Panel members, and hope to continue this useful dialogue to improve our strategy and compete successfully for grant funding through the SRFB. The members of the community and technical committee members of WRIA 13 have invested a great deal of effort to develop the strategy (and projects) for several years, and hope that the culmination of that experience shows in the intent of this strategy.

Clearly, the WRIA 13 strategy is still in development and some ideas are not fully developed, and others are not clearly articulated. We hope that the following response makes clear the intentions of the strategy, and generates more critique from the SRFB, so that we can continue to improve our understanding of our geographic areas and the fish that rely on them, and to develop a cohesive way to sustain them.

I have included page numbers from the WRIA 13 strategy, for your reference, in this response.

Response to Certainty rating as “Good / Fair”

The WRIA 13 strategy found its basis in the Limiting Factors Analysis (LFA), utilizing this document as a starting point for discussion and further studies. In 2003, the joint strategy work of the WRIA 13 and 14 workgroups revised the LFA with new information and relevant data. Strategy development continued with the combined workgroup, identifying the needs of fish in the freshwater and nearshore environments. High priority actions for each sub-basin were determined using relevant studies, particularly within the nearshore, and the professional biological expertise of the Technical Committees. This information constitutes best available science for our area. Considerations for establishing these actions were restoring the streams natural functions within a five-year time frame. The freshwater systems have only begun to be modeled by the Squaxin Island Tribe, who have used EDT for several streams but have been unhappy with the parameters and are experimenting with other modeling programs. This data has not been incorporated into the strategy as the model was not ideal for the small streams we have in the Deep South Sound. Therefore the designations for high priority actions within each sub-basin represent the best science we have based upon empirical data through professional

activities. Given our five-year time horizon, the activities outlined as high priority for each sub-basin will restore crucial habitat process and function to the South Sound vital for salmon.

Response to Fit Actions and Geographic Areas rating as “Fair”

The WRIA 13 strategy attempts to build a case that our streams are part of a larger fabric of the Deep South Puget Sound (including WRIA 14 and 15), a unique series of shallow finger-like inlets, each with their own character (p.11). We understand that the Deep South Sound Tributary coho are scattered broadly among the numerous small tributaries that drain to these inlets and their life strategy utilizing small headwaters for spawning and rearing is well suited for the region. Our strategy to help recover this nearly depressed stock builds on maintaining the diversity of these small drainages to support sub-populations across the landscape (p.16).

Of the 150 coho streams in our region totaling 212 stream miles, nearly 20%, or 39 total miles are located in WRIA 13 (p.16). The streams of WRIA 13, therefore, have a significant role in the success of these coho salmon, despite their apparent size. We consider each of the three inlets (Budd, Henderson, and Eld) to have unique attributes and consider the sub-populations of salmonids distributed geographically among them (e.g. Eld Inlet Chum, Henderson Inlet Chum) to be important factors to the success of the species as a whole.

The stream ranking model developed by the Co-Managers identifies “key streams” in the South Puget Sound, taking into account several factors such as stream length, condition of habitat and numbers of species utilizing each stream (p.44). The model, which favors a multi-species approach, produces a numeric score, which allows a comparison of streams based on their attributes. The numeric scores were lumped into a set of 3 tiers for simplicity in this strategy (p.17). This model is one tool to understand the significance of different drainages in the area.

We recognize the importance of this ranking in the context of the larger landscape, to understand which streams are the most intact and which are capable of sustaining the most fish and most fish species. In our strategy, however, we attempt to go beyond identifying “key streams”, because in order to recover a depressed stock we felt the need to consider the specific needs of the specific stock within its specific geographic range (p.17). For coho, the relationship of the sub-populations of fish to the streams and nearshore habitat of each unique inlet is a central theme we have begun to develop (p.14).

Budd Inlet historically hosted a diverse run of salmonids in its short streams. Almost all the streams in this inlet are now impacted to some degree by urbanization, as a result of the heart of Olympia being developed on the mouth of the Deschutes River (p.21). For coho utilizing this inlet, there is limited certainty of success.

Fish passage is limited in 5 out of the 6 streams supporting coho in Budd Inlet, and access to intact habitat is very rare in Budd Inlet (p.22, Appendix C). (The Deschutes and its tributaries support Deschutes coho, and are not included in this count). Water quality is the major concern in our urbanized drainages, though we continue to find resident fish (juvenile salmonids, resident cutthroat, sculpin, and dace) in our streams (p.24). The biotic integrity (as measured by B-IBI) also remains moderate to high (City of Olympia, unpublished data).

The Ellis Creek watershed is one of the only intact basins in the Budd Inlet – where the likelihood of coho survival success is high. Its location in a city park near downtown Olympia offers protection and outreach possibilities unique to other watersheds in the area (p.61). In terms of our strategy, this stream has a unique relationship (or in other words, “high priority”) to coho in Budd Inlet, and the specific culvert replacement project proposed by City of Olympia and Thurston County this year is a significant project in the strategy.

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Thank you once again for your time and consideration.

Sincerely,

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Certainty: Good / Fair

Actions and geographic areas : Fair

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WRIA 14

December 13, 2005

Steve Leider, Team Leader, 6th Round Review Panel
Salmon Recovery Funding Board
PO Box 40917
Olympia, WA 98504-0917

Dear Salmon Recovery Funding Board Members, Designees, and Mr. Leider:

RE: Response to Draft Review Panel Ratings and Narratives

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Clearly, the WRIA 14 strategy is still in development and some ideas are not fully developed, and others are not clearly articulated. We hope that the following response makes clear the intentions of the strategy, and generates more critique from the SRFB, so that we can continue to improve our understanding of our geographic areas and the fish that rely on them, and to develop a cohesive way to sustain them.

Response to Certainty rating as “Good / Fair”

The WRIA 13 strategy is based on the Limiting Factors Analysis (LFA), the best available science currently for our area. In 2003, the joint strategy work of the WRIA 13 and 14 workgroups revised the LFA with new information and relevant data. The current strategy integrates the LFA along with our current knowledge of salmonid stock status and life strategies, to identify the needs of fish in the freshwater and nearshore environments.

High priority actions for each sub-basin were determined using relevant science-based studies and the biological knowledge Technical Committee. In the nearshore, we relied on the Recovery Plan, authored by the South Sound Salmon Sustainability Group and in the freshwater we recognized the professional biological expertise of the Technical Committees. This information also constitutes best available science for our area.

In response to the review panel’s suggestion to use modeling for freshwater, we are currently tracking the use of models in our region. The freshwater systems have only begun to be modeled by the Squaxin Island Tribe, who have used EDT for several

streams but have been unhappy with the parameters and are experimenting with other modeling programs. This data has not been incorporated into the strategy as the model was not ideal for the small streams we have in the Deep South Sound.

The designations for high priority actions within each sub-basin represent the best science we have based upon empirical data and professional judgment. Given our five-year time horizon, the activities outlined as high priority for each sub-basin will restore crucial habitat process and function to the South Sound vital for salmon.

Thank you once again for your time and consideration.

Sincerely,

Amy Hatch-Winecka
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WRIA 1 SALMON RECOVERY BOARD

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Date: December 14, 2005

To: SRFB Review Panel and Staff

From: WRIA 1 Salmon Recovery Board

Re: Responses to SRFB Review Panel Draft Report

The WRIA 1 Lead Entity would like to respond to the draft Review Panel Evaluations continued identification of the The East Acme Farm Community Farm Restoration Project (No. 05-1570 R) as a Project of Concern and assigning a "good" rather than "excellent" rating for Actions and Geographic Areas in the Fit of the Project List to Strategy or Recovery Plan.

East Acme Farm Community Restoration Project (No. 05-1570 R)

This project represents an attempt to integrate flood hazard reduction and salmon recovery, which is an important element of the WRIA 1 Salmonid Recovery Plan. As indicated previously, this project supports the Lummi Nation's currently suspended "Acme/Saxon Phase 1 Instream Restoration" project (SRFB No. 01-1329) while addressing the concerns of the Acme community. Clearly, when considered in the context of existing work in the reach and the many months of community engagement, the proposed project is important to facilitate recovery of salmon in this reach. It is important to emphasize that this project lays the groundwork for future projects in Nooksack Basin and explicitly incorporates community interests, which will be critical to implementation of the WRIA 1 Salmonid Recovery Plan.

The East Acme Farm Community Restoration Project is primarily a levee setback project to more fully open up historic meander width. This is combined with a soft bank treatment that will provide near-term gains in habitat complexity and diversity in a priority geographic area of WRIA 1. Together, these approaches will contribute to long-term restoration of floodplain and habitat forming processes. The levee setback is to the edge of the historic channel migration area. This will provide an additional 5.5 acres of directly connected floodplain habitats for spawning and rearing related to side channel formation, future channel migration over an additional 400-500 feet of river bottom beyond the current ~700 feet in active channel width at the Lower Hutchinson levee, and produce reduced velocities in the main channel as flood waters more readily dissipate into the newly opened areas. These direct and measurable habitat gains are designed to work in concert with and will help magnify the habitat benefit to be derived from SRFB project No. 01-1329 "Acme/Saxon Phase 1 Instream Restoration", the Lummi Nation project referred to above, and will allow that project to proceed with community support.

The soft approach proposed at the lower site adjacent to the hay field is in response to the currently impaired condition of habitat processes in the South Fork. A symptom of the impaired condition is the accelerated rate of bank retreat at this site. The soft methods employed to stabilize the bank are viewed as interim measures that are expected to last for 25 – 50 years. This will benefit salmon by improving in-channel habitat diversity and complexity, bank stability, and riparian function. By dramatically slowing the bank retreat at this location for this period of time, restoration of more fully functioning habitat forming and maintaining processes, such as a fully functional mature riparian zone and adjacent floodplain, will be enhanced and the bank will be able to respond more naturally in the future. Furthermore, planning ahead will reduce the potential for a catastrophic channel avulsion and the need for possibly heavy-handed flood responses and subsequent disruptive and expensive restoration measures.

In closing, this project provides direct and measurable habitat benefits and goes about it in a manner that has community support.

A "good" rather than "excellent" rating for Actions and Geographic Areas in the Fit of the Project List to Strategy or Recovery Plan

We suggest that an "Excellent" rating should be assigned to the "Actions and Geographic Areas" component of WRIA 1's 6th Round Project List because all of the projects on the List are high priority for recovery of Nooksack early chinook populations. We understand that the SRFB Review Panel's "Good" rating was assigned primarily due to the inclusion of Lower Canyon Creek on the Project List. Our rationale for stating that Lower Canyon Creek is a high priority project is provided below:

- The ultimate objective of the *Lower Canyon Creek* project is to correct the fish passage barrier and restore habitat and habitat-forming processes in lower Canyon Creek, an important tributary for spawning of North Fork/Middle Fork Nooksack early chinook, and also for bull trout. The project is identified as a key action in *WRIA 1 Near-Term (10 Year) Actions*, the component of the *WRIA 1 Salmonid Recovery Plan* that outlines the actions proposed for implementation over the next 10 years. Implementation of **all** the near-term actions – not just the actions in the highest priority areas – is necessary to halt the downward trend in abundance and productivity of Nooksack early chinook populations and reverse the trajectory towards recovery. As the Review Panel members are aware, recovery of Nooksack early chinook populations is critical to recovery of the Puget Sound Chinook ESU.
- The fish passage barrier in lower Canyon Creek represents the second most important fish passage barrier for Nooksack early chinook populations, after the Middle Fork diversion dam. Restoration of fish passage is considered the most cost-effective salmonid habitat restoration strategy. Design for passage restoration at the Middle Fork diversion dam is complete and construction could occur as early as summer 2006, so addressing the Canyon Creek barrier now is appropriate sequencing. The Canyon Creek watershed is mostly in Federal ownership and is well protected. The creek is large enough to always support spring chinook and bull trout spawning, even in years with low flow.

The projects that are included on WRIA 1's project list represent the highest priority projects that are ready to move forward at this time. In the *WRIA 1 Salmonid Habitat Restoration Strategy* (Table C-1, *Relative importance of geographic areas for combined Nooksack early chinook*), there are 4 general geographic areas that are assigned the highest restoration priority rating of "A": the Nooksack estuary, South Fork to Larson's bridge, North Fork to Glacier Creek, and the Middle Fork at the diversion dam. As mentioned above, design is complete for passage restoration at the Middle Fork diversion dam and construction is imminent. Of the four projects on the current project list that are restoration projects (either direct restoration or a study leading to restoration), two are in the lower South Fork (downstream of Saxon Rd. bridge) and one is in the Nooksack estuary. Reach assessment and restoration planning in these areas is complete and project design and construction is the next step in the sequence. Reach assessment and restoration planning is currently under way in the two remaining areas – the North Fork (to Glacier Creek) and upper South Fork (upstream of Saxon Rd. bridge). These plans will lead to identification of projects that will address the highest priority limiting factors in these areas. Proposing projects in these areas, therefore – although they are two of the highest priority geographic areas – would be premature and inconsistent with our emphasis on strategic restoration based on best available science.

In closing, we respectfully request that the SRFB Review Panel reconsider its conclusions relative to the WRIA 1 Project List on the basis of the information provided above.